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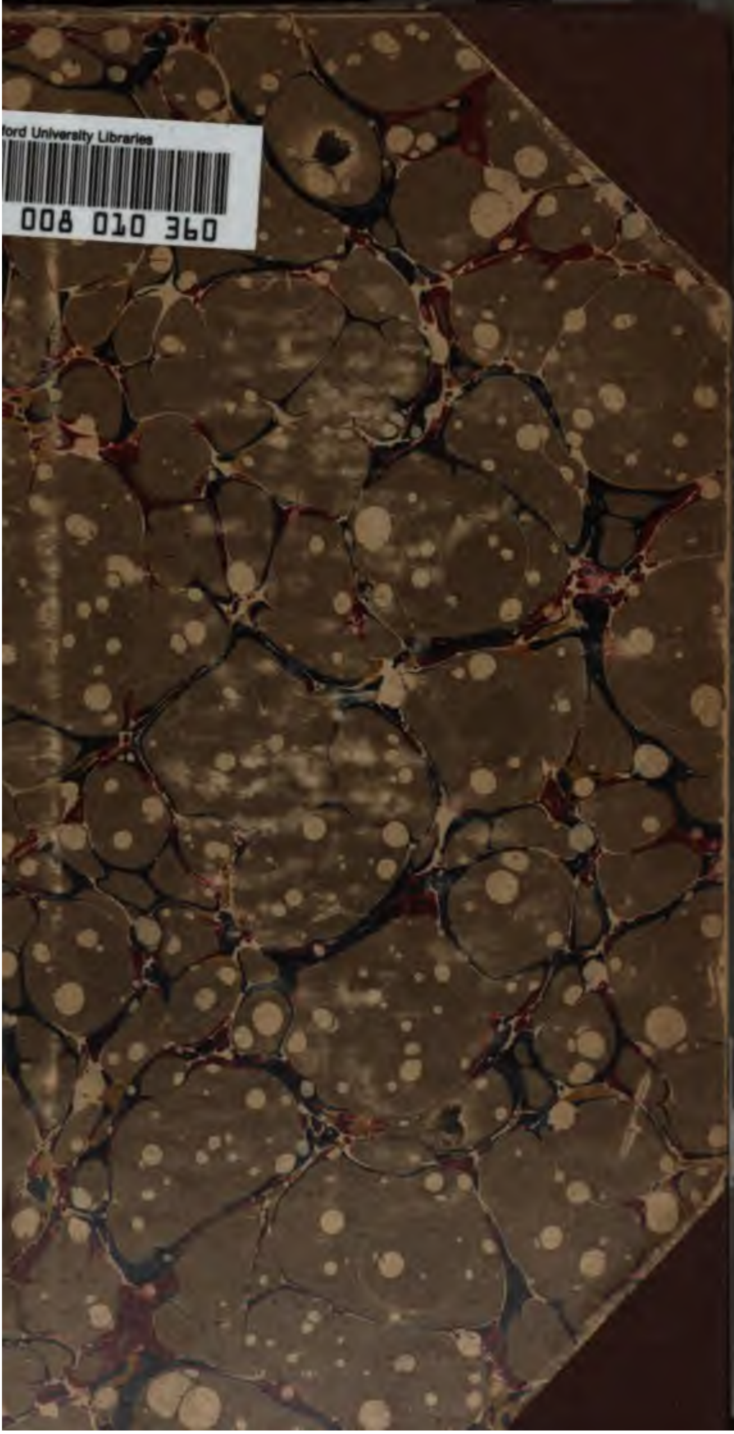

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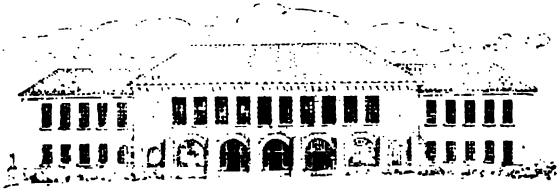

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A Monthly Magazine of Pedagogy and General Culture for Teachers, Normal Schools, Training Classes, Reading Circles and Home Study

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Program for 1902-3.

The fourteenth year of EDUCATIONAL FOUNDATIONS begins with the number for September, 1902. The program for the new volume will be a most attractive and profitable one. Here are some of the good things that may be expected:

School Management.

Supt. Charles B. Gilbert, of Rochester, N. Y., one of the strongest school men in America and recognized as a progressive leader in education, will contribute a series of most valuable articles on every-day problems of school administration. In this course will be discussed many of the perplexing questions involved in the relationships between teachers, pupils, and parents; between principals and assistants; between superintendents, the teaching corps, and the community. Several of these topics, tho of vital importance to every one engaged in school work, have never received adequately practical treatment in print before. Superintendent Gilbert's wide experience and remarkable grasp of the subject gives ample assurance that the course will be a particularly noteworthy one. The opening article of the series appears in the September number.

History of Education.

There will be several articles on topics connected with the history of American education. Professor Will S. Monroe, of the State normal school, at Westfield, Mass., will contribute to this department, and a most interesting series may be looked for. This will be supplemented by outlines of the general history of Education in the past five centuries.

(Continued on 3rd page of cover.)

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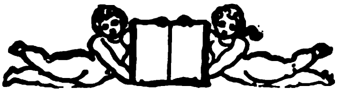

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Educational ❧ Foundations

Ossian H. Lang, Editor.

VOL. XIV. SEPTEMBER, 1902. No. 1.

New England Primer Days.

By Secretary FRANK A. HILL, Mass. State Board of Education.

[Epitome of an address.]

SIR WM. BERKELEY, the governor of Virginia, in a letter to the king two centuries ago, thanked God there were no free schools within his jurisdiction to make the people discontented and seditious. Not far from the same time, Cotton Mather was addressing these words to his congregation in Boston: "The more liberal education we bestow on our children, tho we should pinch ourselves for it . . . . the greater blessing are they like to become, not only to ourselves while we live, but also unto the Commonwealth when we shall be dead and gone."

These men spoke for two widely different policies; the one to perpetuate ignorance, the other to dispel it; the one in the interest of overseers, the other in that of humanity.

Our forefathers began at the top. When they numbered but four thousand souls, and were hardly by the camping-out stage, they founded Harvard college. The free school system was made compulsory in 1647, but free schools existed many years before.

The evolution of the school-house is also a most interesting study. In many of the buildings, especially those of the early academies, we will recognize the plans of men educated at Eton, Harrow, Rugby; and so the stamp of Old England was impressed on the simple architecture of the New England wilderness.

The first teachers were men exclusively,—stern, strong, and orthodox. School and church worked together each acting in the aid *of the other*. Girls did not tend the public schools nor were women employed in them as teachers until near the beginning of the present century. They were not educated like the boys, and so were not competent to instruct. Indeed, the girl was of little account in the educational schemes of our fathers. She received a little attention, perhaps, in the dame and nursery schools. She was well educated if she could read. To write, to cipher,—these were accomplishments. What did not bear directly and obviously upon cooking food, scrubbing floors, spinning yarn, milking cows,—what could not be seen to have an immediate market quotability,—all this was not practical, wouldn't help a girl fill her station one whit more acceptably, and was, therefore, useless. She worked into the system very slowly, and usually in the face of protest. She recited to the master after the boys were dismissed; she was provided for in separate schools; she was permitted to attend summer schools with the boys, but not winter schools. And so for a long time she hung about the outskirts of the system.

In separate schools for the sexes to-day, old-time conservatism is shown. It is less than twenty-five years since Boston has decided to give her girls the same opportunity to fit for college that her boys have had for more than two hundred and fifty years. The attempt to open to them the doors of the old Latin school failed, and so a new school, the Girls' Latin school of that city was organized.

The discipline of the early schools was harsh. Perversity in the young was to be expected and provided for. They were all theoretically depraved, and some naturally. The flesh needed to be mortified.

These old-time schools began commonly at seven A.M., and closed at five P.M., with an hour's intermission. The winter hours were eight to four.

Studies were few. Chiefly Latin and Greek in the grammar or college-fitting schools, and reading and writing in the English schools. Books were scarce. There was the Bible everywhere and always. There was the "Bay State Psalm Book" that sounded the depths of poetry if it didn't scale the heights. For more than one hundred years, and well into the present century, the "New England Primer" was the almost exclusive juvenile book. It was the first book in language, the first in religion, and to many the first and only book in literature. Its range was from a-b, ab, to the profoundest dogmas of theology.

The somber thought-drift of the times is caught in a list of twelve six-syllable words to be spelled, five of which are *abomination*, *edification*, *humiliation*, *mortification*, *purification*. The primer bounds in six pages from the alphabet to the Apostles' Creed. The rhymed couplets designed to convey bits of advice, moral lessons, suggestive facts, are familiar to all. The illustrations were crude, and varied with the ingenuity of the printers who frequently designed them, and the capacities of the poorly-equipped offices from which they came. Nearly half the primer is devoted to the Westminster catechism, whose one hundred and seven points had to be committed to memory by nearly all. The effect (of this work) on New England character was marked if not uniform.

The primer days may be said to have closed about the time of the great educational awakening that witnessed the founding of the American Institute of Instruction in 1830, of the Massachusetts board of education in 1837, of Massachusetts normal schools in 1839, and the general quickening of educational life in this state, and later thruout New England, under the fearless leadership of Horace Mann.

The progressive development of the schools shows most impressively how wisely the fathers planned, even tho in their execution they fell often painfully short of their ideal. The ideal of a common school for the universal education of the people has existed in New England statutes from the beginning, clear, bright, and lofty, high above the attainment even of the present time.

The Function of Knowledge in Education.

By SUPT. C. B. GILBERT, Rochester, N. Y.

The term "knowledge" is here used in the objective sense as covering what is commonly called the "body of knowledge," including both things known and things knowable. This is in contradistinction from the term used in its subjective sense, as the mental process knowing.

Ask any boy what he goes to school for and he will answer "to learn." Ask his father why he sends his children to school, and unless he be an educational theorist he will answer, "to learn." The public draw their notions from our practice and from their sense of the children's need.

Educational theories and definitions notwithstanding, the acquisition of knowledge is both in popular notion and in pedagogical practice the substantial thing in education and it behooves us to consider what is its function. It might have been better to use the plural in my title, as there are several recognized functions of knowledge in education.

First is the popular and wholly obvious one of serving as the working basis for all intelligent activity and hence for all education. Such knowledge is called intelligence and in the popular mind is confused with skill learning, with learning how. This intelligence includes acquaintance with the more usual symbols employed in reading, writing, and computing, is naturally essential to any considerable advance in education, and hence is recognized as a sort of substratum for all theories.

A second function of knowledge is as a gymnastic; thru the act of acquiring knowledge the mind is disciplined. This function, when emphasized tends to the disregard of content and to the consideration of disciplinary value alone. The educational theory based upon it is medieval in origin, or perhaps theological. Its type of efficient reasoning is the syllogism, thru which a man may sit upon a pedestal and learn the world with his eyes *shut.*

A third function is an outgrowth and expansion of the first. As stated in a report of the committee of fifteen, it is to acquaint the child with the civilization in which he is to live; that is, to give him a larger intelligence. This produces a nobler view of the end of education than either of the others, but one which manifestly defies and disregards any definition of education which its advocates would accept. It makes the acquisition of knowledge itself and not the effect in the mind the norm. Both this and the first named accept unreservedly a physical as distinguished from a biological analogy for the educational process.

The evident notion of the advocates of both these theories is that the mind is to be stored with useful knowledge, not to absorb and digest it. It is a receptacle, not an organism.

There is a fourth function of knowledge in education recognized by some, many in theory, few in practice, namely to furnish nutriment to the growing mind. It regards the mind as an organism capable of growth and looks upon education as a process of growth. This view is surely nearer the truth than that which treats of the mind as a receptacle to be filled or a building to be constructed, and of education as storing or building. And yet the ordinary school continues in its practice to treat the mind as a receptacle to be filled.

The first and third stated notions as to the proper function of knowledge in education rest plainly and almost avowedly upon the receptacle theory, storing the mind with useful knowledge. The first would store it with knowledge for immediate and practical use, the third with wider and higher knowledge for remoter and more spiritual uses, but both treat the mind as a receptacle. The second, the disciplinary theory is a singular mixture of the two figures. The mind is a tool to be sharpened and a something to be trained as animals are trained according to an extraneous law, not to be nourished with food convenient for it according to its own law.

To make clear that my statement of the case is a fair one, let us consider the kind of school which is the product of each of these views.

The Three R's School.

Two kinds of school are the product of the first, or common intelligence notion, the school of the bare three r's and the so-called commercial school which in most cases is the school of one r, 'rithmetic. I do not refer to the recently developed commercial high school. Such a school represents the bare bones of education and indeed of knowledge, and none of us would advocate it, and yet the country is full of such schools and vast numbers of our citizens believe in them and are opposed to any other for the common people. Such schools, so poverty stricken, so wholly inadequate to the training of citizens are the product of a false analogy, the physical as distinguished from the biological.

The Disciplinary School.

The second notion of the proper function of knowledge in education, the disciplinary, is responsible for the formal discipline fallacy with all its woes. This theory practically disregards the content of knowledge presented. Any old thing will do. If the first is responsible for the grad grind, the second is responsible for the dull grind which kills the school, crowds out the discouraged, over-accents the law of the survival of the fittest, and deprives the school of joy and spontaneity, by forcing upon the child a law not his own. This is serious enough in higher education, but in the elementary school it is deadly. Here it stands for the meaningless repetition of words, for rules without understanding, for language without thought, for drill without content, for life with neither interest nor joy. It is bare, barren, and altogether unlovely. On the ethical side it stands for the breaking of the will, the complete nullification of individual initiative, for absolute unquestioning and unreasoning submission to external authority, for formalism, hypocrisy, spiritual anarchy, for force and violence.

Verbal Culture Schools.

When we come to the school based upon the third function of knowledge what might be called the higher intelligence, we reach a distinctly better school, because the range of knowledge is broader, its content richer, and hence the interest of the student greater. It is the school of verbal culture in which a great deal is learned *about* many things. It is at its best in dealing with history and literature, at its worst in the study of nature and social life. For it, have been written innumerable books about things, nature books, art books, histories of literature dealing carefully with the births and deaths of authors, histories with lists of dates and a few facts appended like tails to kites, information books on all subjects, in short, every possible substitute for real knowledge. It is the school of words, words, words. But as the subjects dealt with are many and those generally recognized as important, it has led inevitably to higher interests. The mind has been "stored" with much useful knowledge, some of which, in spite of the theory, has nourished it.

But the school has fallen short of its true aim. It has been the foe of freedom, of individual initiative, of self-government, of real as distinguished from verbal knowledge.

Let it be remembered, the great failure in all these schools is the failure to consider the needs of children, their internal, real personal need, their need for food whereon they may grow, as determining to any extent what should be given them. That must all be determined from without, witness the report of the Committee of Fifteen. Each child's own mental state may determine the order in which food shall be presented, soup, fish, meat, salad, desert, but not to even the slightest degree what the food shall be, for he is not to be nourished but to be *supplied. This is* a fatal error.

Educative Function of Knowledge.

The last mentioned function of knowledge I hold to be its real educative function, that of supplying nutriment to growing minds.

This function of knowledge is not only higher than the others, it includes them. Knowledge selected and presented with a view to nourishing the mind also and of necessity produces the most useful intelligence, the finest discipline, the widest, truest culture. It is the point of view that is changed and with it the entire content and method of education is modified.

This doctrine that the true function of knowledge is to nourish minds, after the biological analogy, naturally demands a careful study of minds, as distinguished from mind, especially of young, immature, and growing minds.

It reduces the possible generalizations upon education and compels us to take account of the individual children. Indeed it substitutes children for the child. This is a hard doctrine.

This doctrine compels us to admit that the need of each child must to a very considerable degree determine both the subject matter and the method of his education. It asserts that interest, appetite, is one of the indications of need. Of course, it does not deny that there may be bad appetites which may not be indulged, that the child may not have an appetite for what he has never tasted and hence new appetites must be induced by the presentation of new foods. But this is a mere caution. It denies that all food is fit for all children. It recognizes that a child is not a little adult, but is a very unevenly developing organism, whose proper nutriment can only partially be determined by any generalizations or systems of averages regarding that which is outside of him.

The mind truly nourished by knowledge is not inflated like a balloon, it is not expanded into a sphere, it is not even symmetrically developed; it grows into its environment near and remote, it develops strength for use in *the* world it must live in.

. . . .

No one holds in greater reverence than I the treasures preserved in literature and the other monuments of men's labors. But the value of all this is manifest only when it makes men more efficient in the present. It is well, it is noble, for men in cloistered retreats to seek out and preserve truths unknown before, because even tho they may little enrich the discoverers, they enrich the world and will enable others to better serve their day. Such search is the exalted mode of serving chosen by the few. It is their life, but this is not education for the many.

In education the study of the school interprets life and life interprets it. The relation is mutual. The riches of all ages and all worlds in so far as they are disclosed to the eye minded merely nourish thru knowledge the student's mind and hence they give a wider and fuller and deeper insight into the world in which he must live and work and make higher service possible.

The popular demand for practical education rests on a firm foundation of philosophy and psychology. It is, like an instinct, not to be ignored. The popular error is not in the demand but in a misunderstanding of what is really practical, narrowing it to a few manifest values, as the commercial.

But the people are often wiser than the philosophers. Knowledge acquired in education should be closely and constantly related to life. It should expand life. The double life is absurd. At no time should the content of knowledge given the young for educative purposes be narrow. It should be as broad as interest and should continually broaden interest.

The mind that is filled but not nourished is subject to dyspepsia. Nourishment includes vastly more than the mere acquisition of food; it involves such exercise as shall change the food into brawn. That is, the function of knowledge is to supply not power but stuff which may be worked up into power. This exercise may not be merely the effort necessary to acquisition.

Tests of Educative Schools.

The test of the value of a theory regarding education and of the sincerity with which it is held is found in the kind of school produced. There are instances enough of the truly educative school to serve as criteria.

In this school the children are the first consideration, not merely theoretically and sentimentally, but truly and thoughtfully. Their needs are the basis of all the instruction and these are determined by the careful study first of the children themselves, second, of the world around them in which they must live, and they are studied together with the aim that each child may grow into social efficiency, which is the end of education.

Thoroness is not in this school a fetich ; only so much of a branch of knowledge is given at a time as can be digested and assimilated. To expect a little child to know thoroly any subject is as absurd as to expect him to consume all the bread in the house before eating any meat. Yet his knowledge is not a smattering. What he knows is thoro in one sense because it is vital. He knows thoroly what he knows for it is a part of him, after the biological analogy.

The elementary school in which the teachers sincerely and intelligently believe that the educative function of knowledge is to nourish the mind is the school in which children live a real life of joyful activity. They go to their work with an eagerness comparable only to that with which they approach the dinner table or play or any of the many natural activities of body or mind.

There is always a motive inherent in the work; it supplies a felt need. The activities employed in the process of education are no more unnatural than those essential to physical growth. The mind is surely as natural as the body and when healthy and normal requires no more a violation of nature for its growth than does the body. But the work of the school is the work of children and not of adults cut to a smaller pattern. There are activities suitable to children and they all have an obvious purpose acceptable to the childish mind. Tasks dictated for an end obvious to the teacher alone, altho that end may be the future welfare of the children, do not appeal to them. They certainly do not cultivate that most necessary of powers, the power to labor, to drudge even, for a high tho remote end, for this power comes only from an appreciation of the worth of this remote end, not from blind obedience to another's will.

It is this appreciation of the worth of the end that supplies the inspiration necessary to carry us thru long years of dreary drudgery toward a sought goal, and this end is evident in the true school, resting according to the biological analogy upon the belief in the living, growing mind requiring nourishing. It is lacking in all schools founded upon any other basis.

In this school the children acquire intelligence, for the air is charged with it. They not only knew the common symbols of the eye minded, they can apply them in a thousand ways not dreamed of in the "practical" school. They can read and write and cipher, for they continually use these arts to express the thoughts suggested by the thousand things learned in their school life, and their intelligence is real not verbal.

The children in this school receive discipline, for they work as they never do in the other schools. They work with a will because they work with a motive. They get the kind of discipline that the man gets who toils night and day to perfect an invention for the advancement of civilization.

The motive is inherent in and consistent with the work itself. It is not foreign and artificial like a mark or a prize. This is the only true discipline. This develops self direction, self sacrifice, the subordination of ease and all lower pleasure to the higher joy of work for achievement. It cultivates moral power, inner law, in place of the hypocritical yielding to external force too often bred in the so-called disciplinary school.

This school also furnishes the higher intelligence, the broad culture of the third class but vastly richer and more real.

The content of the curriculum in the nutritive school is as broad as civilization, as extensive as the world, and it is approached in such a way as to make the knowledge real.

In no school is knowledge so highly valued, real first-hand knowledge. The whole broadening of the curriculum which is the most noticeable phenomenon of our modern school is due to the spread of the belief that the mind is to be nourished by knowledge. Literature, history, science, music, art, sociology, manual training, domestic science, have come into the school thru this door. True, many have accepted them, not comprehending their educational value, but that does not affect the major fact.

In this true school children are made acquainted with their material, social, and spiritual environment as in no other, not primarily because there is such an environment a knowledge of which is useful, but because this knowledge furnishes the best nutriment to a mind growing into organized society, a society whose subordination of its material environment to spiritual ends constitutes its chief claim to superiority.

This school is the school of expression. The children engage in numberless activities employing all the powers of their minds. They express in varied ways what they receive. Thus they make it their own, incorporate it into the very constitution of their minds. The knowledge is not stored up against the day of comprehension, but by the exercise attendant upon the various means of expression it grows into the fiber of their beings and makes them strong and adaptable, as the athlete by exercise makes his food a part of himself.

In this school is freedom and joy and hard work and discipline and abundance of knowledge, because the center is a child, a growing child, needing nourishment rich and varied, and every activity engaged in, and the knowledge imparted, is prepared to meet his needs. Thus and thus only is a child best fitted for social efficiency, and civilization is best served.

The Kindergarten.

By Supt. F. Louis Soldan, St. Louis, Mo.

THIS name of "Kindergarten" suggests its leading thought. What a garden is for the flowers, the kinder garten should be for the children; it should furnish place and environment for natural growth, with all the attention, interest, care, and love devoted to the children which the gardener gives to the budding flower, to secure to it the hardiest and most beautiful growth. Instead of the books and maps of the school, there are toys or gifts; there is the quiet and unrestrained talk of the little ones instead of the lessons of silent study; there are the occupations, there is fascinating work with building blocks, the weaving of mats from beautifully colored strips of paper, social games with others, instead of the tasks of the school with its demands on the child to sit still and to mind his individual work; there is no stimulated and enforced, but natural activity of the child. He follows his own bent. The child in the kindergarten learns thru what he is doing, and not thru what he is told. In this lies the vital distinction between kindergarten education and the principles of school education as it used to be. In the kindergarten the child's education is a growth rather than an inculcation.

The true pedagogical principle of which every kindergarten teacher must be mindful at every step, is that her function is not to artificially strain the child's energies, but to follow the lead of child-nature. She must rely on the natural activity of the child, and keep within the limits of his age and his peculiar mental and physical constitution. While the great idea of the kindergarten is based on the eternal verities of human life, of which the crown and glory is neither knowledge nor scholarship, but good deeds, all the educational work of the kindergarten must be based on the study of the physical and mental possibilities of the child, and the laws of his growth. No ulterior aims or methods must be allowed in the kindergarten to infringe on the one great aim of promoting the child's healthy growth, physically and spiritually in accordance with the laws inherent in him. The best way of preparing the pupil for school and life is to adjust education to the child, as he is, making that which is noblest and best in him unfold and grow thru his own activity in play and work, and according to the laws of his own being.

The chief task of the kindergarten is education, not information. In other words it seeks to develop power and does not aim at teaching the data of knowledge. Altho the kindergarten does not aim at instruction, the child learns much. There is hardly any place in the whole educational curriculum where, in the same space of time, the child obtains, incidentally, as much and as valuable information as he acquires during his year in the kindergarten. Notwithstanding that information is discarded as a direct aim, he receives the most valuable insights into life and gains important elements of knowledge which subsequent instruction in the school is to deepen; an interest in the great departments of school work is indirectly aroused. The hand is made deft thru play, and thereby writing and the handling of the pen and pencil become easier; the play with building blocks develops the idea of number and their relation which is the ground-work of arithmetic. The eye is trained in the recognition of geometric forms and the learning of the forms of the letters is facilitated thereby. The songs of the kindergarten enrich the vocabulary of the child and train him in the elements of literary language, making his future reading lessons more profitable and intelligible.

There is an infinite variety of play and work in the kindergarten. There are Froebel's "gifts," or building blocks; there are occupations such as the weaving of mats out of strips of paper, laying sticks in imitation of the forms of objects; games during which the children move about in free play with each other; there is much music and song accompanied by gestures, the songs giving glimpses at the occupations of man and at the life of animated nature. While the educational aim predominates in the arrangement of play, occupation, and song, there are, also, elements of solid information which the child, imperceptibly and almost unconsciously, acquires.

The blocks with which he plays, gives the numerical relations of objects and the fundamental ideas underlying the work of arithmetic. The child may not become conscious of all the information he obtains thru his play with the gifts, but it nevertheless becomes a factor in his experience which helps him later, to acquire a knowledge of arithmetic more easily, intelligentlly, and thoroly. Thus, the third gift in Froebel's system is a large wooden cube divided into eight smaller cubes. The child perceives in a measure by his constant handling of these cubes in the building of new forms and in arranging them on his table in play, the numerical and quantitative relations of number, such as four being twice two, or eight four times two or eight times one. The fourth of Froebel's "gifts," a cube divided into eight parallelopipeds, gives him an acquaintance with new quantitative relations on account of the difference in the sides of each solid. The fifth gift, or a cube divided into twenty-seven small cubes, gives him the idea of the ratio of three, such as thirds, ninths, etc., and of numerical relations connected therewith. While it is true that the child does not undertake the formal study of mathematics in the kindergarten, nevertheless he acquires those first ideas of numerical relation which makes future mathematical study easier for him.

The kindergarten does not make arithmetic the subject of recitation or drill. This play with blocks, nevertheless, forms a preliminary educational step for later formal instruction. When the formal teaching of arithmetic begins, the child will possess some experience in number, ratio, and numerical relations. His mind is prepared thru its training in the kindergarten to grasp the idea of number consciously and thoroly. The early awakening of the mathematical sense thru play, fits the young mind for the later and more serious instruction of the school. The preparatory work of the kindergarten for instruction in arithmetic is typical of its attitude towards every other subject of instruction. It breaks the ground and makes it ready for the reception of knowledge to be acquired formally and consciously in school and life. It initiates the child symbolically and actually to the knowledge of nature, man, and God, and predisposes him to creative work in harmony with divine laws.

The educational advantage derived from the play with Froebel's "gifts" is not confined to the development of elementary mathematical ideas; the child's attention is drawn to the form and function of things and objects in his surroundings. The strong faculty of imitation which is peculiar to early childhood is put to good educational use. Imagination is called into play. The child is encouraged to build things which he has seen, houses and bridges, tables, and seats. He delights in this constructive and imitative activity. In order to be able to indulge in it, he must observe more closely with eye and mind, the forms of surrounding life which he desires to imitate with his hands. He must recollect and image them as he imitates their form with the blocks on the table. There is abundance of important educational practice in this. Those nerve channels, from eye to brain and brain to hand, along which energy is to flow readily thru all the years of active life, are opened and energized by this process. Not only imitation, but free creative imagination, whose growth is essential for the development of originality and individuality, finds room for display when he uses the same blocks not only for imitation but also in constructing forms which he invents himself, stars, ornaments, and whatever shapes his fancy suggests, not images of things seen, but forms created by his imaginative mind. There are three great elements of education involved in this play: the acquisition of typical knowledge, the imitation of the forms of life, and the constructive invention and expression of simple ideas of beauty originating in the mind within.

The "Occupations" of the kindergarten, such as the weaving of mats from colored strips of paper, open a new line of training. While in the "gifts" or blocks the child observes and re-arranges forms given to him, the occupations introduce him to manual labor and the idea of creative work. They differ from mere play and are akin to work since the child by the labor of his hands creates a new object, which he feels he has made himself. When he brings the result of his work to his kindergarten teacher or his mother as a gift, there is implied in this act, the first experiences of the usefulness of work and of the pleasure of working for others. The occupations present many opportunities for manual and æsthetic training. When the child imitates the forms of objects by laying sticks, or when he selects strips of paper of various colors and weaves them into mats of harmonious tints, his sense of color is developed and, what is more important, his hands become more deft and thereby more serviceable to the mind.

The life of the child is perpetual motion, alternating with sleep. The more quiet activities of play and occupation, the kindergarten system supplements by the addition of games, during which children have opportunities for all sorts of motor activities; they run, and jump, and march as they feel prompted by the spirit of the games. In these games, which are accompanied by song and by gestures, illustrating word and sentiment, imagination has unbounded scope. The child is the farmer that sows the seed; he is the bird that sits in the nest and then opens its wings and flies; he gets glimpses, thru the activity of his play, at the world beyond and enters into sympathetic touch with social life, with nature and the animal world.

Much of the kindergarten training is, and ought to be, music and song. The child loves music, and singing is for him, both physically and spiritually, a means of development and growth. His first lessons in the use of English and of refined words and well-knitted sentences of literature, may possibly begin when he learns his kindergarten song by heart. If he obtains mental possession of one of Stevenson's or Field's little poems, it is an important step in literary training and in the development of good taste. He learns a vocabulary richer than that of the home and the street. It is true that the new words in the kindergarten song are not defined and no word lesson is presented, but the rhythm of the song and the many gestures accompanying each part of it are efficient means of interpretation which open to the child, gradually, the meaning of the whole and in a measure of each word. He forms his first acquaintance with the literature of the world in its simplest form, the nursery song.

The realms of nature, too, are disclosed to the child in the kindergarten. Plants are raised on window sills and stands. The children observe the seed, which is planted ; they watch it daily and see it sprout. They learn to look with observing interest upon the processes of nutrition and growth which underlie the whole of plant life. There are birds in cages that fill the room with song ; the child loves them and learns to care for them. The teacher gathers cocoons in the fall that the child may see the butterfly leave it and spread its wings. The child is kept in sympathetic touch with nature and experiences the typical facts of her life. Thus a many-sided, varied, and active interest is aroused.

Education should humanize the child ; it should tend to make it a good member of society and to instill lessons of altruism. The only educational means by which this end can be brought about is intercourse with others. The child's association in the kindergarten with his equals in age, in kindly and sympathetic intercourse. is in itself a means of training the character which even the best home cannot furnish in the same measure. Man becomes a social being thru intercourse with others *and in no other* way. His character forms when he meets his equals in the relations of life. This important lesson is begun in the kindergarten when the child joins others in play which he enjoys more than his toys at home, because he has others to play with. When he comes to love the kindergarten, playmates, and teacher, an important altruistic lesson is learned by the child.

In all the gifts, occupations, and games of the kindergarten, there is growth. The eye grows in strength, the hand becomes deft and yields more readily and fully to the promptings of the mind; the powers of action, of planning, of executing ideas thru creative work are cultivated. Above all things the education in the kindergarten is in accordance with the highest physiological law of young child nature, which requires that the child should be allowed to follow his motor impulse freely. It is torture for the child to sit still. It is his delight to be playing or doing something. To this tendency the kindergarten gives full scope.

The child experiences the pleasure of work at an early stage. He learns not only to be active in play, but to work, to invent, and create. He learns to delight in the work of his hands.

There is another far-reaching influence which the kindergarten exerts. It attempts to initiate the child early into the truths of ethical life. While, in his games, the child gets glimpses at the occupations of society and at nature, he obtains, in the stories, fairy tales and myths, which he hears from the lips of his teachers, an idea of great ethical principles. . . . A deeply religious spirit, moreover, pervades every exercise, song, and the daily practices of the kindergarten.

The discipline, if such a word can be used, of the kindergarten is based on that quiet guidance which every sensible adult will use by preference, in his dealings with children, as a means for making them know and do what is right. There is an atmosphere of joy and happiness about a well conducted kindergarten which may well serve as model *and ideal for* every other school-room.

Caution in Child-Study.*

By M. R. Walker.

It is an interesting speculation to consider what might be the first impressions of a child who had fallen asleep Rip Van Winkle-wise in the early years of the nineteenth century, and had awakened in the beginning of the twentieth.

His interests would naturally connect themselves with the children of the present day, and I think we may assume with certainty that many things in their lot would astonish him very much in contrast with those to which he had been accustomed. For he was a member of the family and of society who was expected to occupy a position of insignificance. His wishes were not much consulted; the wishes of grown-up people were imposed upon him. His feelings were not much considered, but he was expected to regard the feelings of his elders. His advice was not much asked for, but he received a great deal of unsolicited advice from grown-up people. Writers of fiction and poetry had not taken him much into account; he was obliged either to read books written expressly for his elders, or to content himself with a limited number of juvenile books, in many of which the desire to promote his moral and spiritual welfare was too evident to be altogether palatable.

What would he find to-day? So far from being insignificant members of the household, the children in many cases seem to be the pivot round which everything else revolves. What the children desire settles many domestic questions. The feelings of the children, real or supposed, determine to a considerable extent the behavior of their elders towards them. The voice of the children is not seldom heard in family conclaves, and sometimes it has the honor of the casting vote. Not only have we a flood of literature written expressly for children, but we have innumerable books about children written for their elders; and tho the moral and spiritual welfare of the child is not lost sight of in such literature, the rights of the child and the pleasure of the child are ever-recurring themes. The final touch to the astonishment of our suppositious child would perhaps be applied if he chanced to look into a pedagogical magazine, and there discovered serious directions for consulting an infinite number of children as to whether any punishments they had received were just or unjust, and why they were so; or equally serious directions for a short but sensational examination paper: "What would you do if you saw a ghost?"

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* Address to the Edinburgh Branch of the British Child Study *Association.*

The subject of the present paper is not to reckon up the respective losses and gains involved in systems of bringing up children which present such marked contrasts. Some of us may feel strongly that the pendulum, which in times past swung too far in the direction of severity and repression, is now swinging too far in the direction of indulgence and freedom from restraint; but I think we shall all agree that the period of childhood and of boyhood and girlhood is a happier period for the young people of to-day than it was for their great-grandparents, and the children of that generation generally. I think, too, that we shall all agree that this change has been largely brought about by study of the nature of the child.

The Age of Child Study.

The name, "Child Study," is new, but the study itself is not a thing of yesterday. We find the idea, for example, in Locke (1632-1704), who says: "He . . . . that is about children should well study their natures and aptitudes, and see by often trials what turn they easily take, and what becomes them; observe what their native stock is, how it may be improved, and what it is fit for."* The Scottish philosopher, Reid (1710-1796), writes in one of his essays: "If we could obtain a distinct and full history of all that hath passed in the mind of a child from the beginning of life and sensation till it grows up to the use of reason, how its infant faculties began to work, and how they brought forth and ripened all the various notions, opinions, and sentiments, which we find in ourselves when we come to be capable of reflection, this would be a treasure of natural history which would probably give more light into the human faculties than all the systems of philosophers about them from the beginning of the world." Just about the same time we find Rousseau writing, "I wish some wise man would give us a treatise on the art of observing children. This would be a most important art to acquire ; at present parents and teachers do not even know the elements."*

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* Locke's "*Thoughts on Education*," § 66.

A very little later we find Pestalozzi, in Switzerland, keeping a careful journal of the mental progress of his infant son, and Maria Edgeworth's stepmother, in Ireland, writing daily notes of the mental progress of the members of a numerous family. Later still, we find Froebel systematically studying the ways of little children in the infant schools of Berlin. More than sixty years ago, Darwin published his "Biographical Sketch of an Infant,"—the study of one of his own children—undertaken, I believe, primarily in connection with his book, "The Expression of the Emotions in Man and Animals," but found to be useful in throwing light upon other mental manifestations in the young child. About the same time the French philosopher, Taine, made an exhaustive study of a little girl two-and-a-half years old, and published his observations. The idea—never, surely, very far from the heart of any true lover of children, but thus taking more systematic form in the thoughts of the philosopher and the man of science, the teacher and the parent—has gradually spread until, at the present day, "Child Study," in its essentials is recognized as an important department of knowledge, and as one which has exercised, and is exercising, an important influence upon the methods by which children are brought up.

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* Emile, Book III., p. 213.

Difficulties to be Encountered.

I say, in its essentials, because tho there are those who object to the methods, or to some of the methods, of procedure employed, no one who really understands what is meant by the education of a human being (taking the term education in its widest sense) can dispute the proposition that the more we know about the nature of that human being, the better chance there will be of accomplishing the task we have, as parents or teachers, undertaken to fulfill. The difficulty lies in knowing how best to carry it out, for the study of children, or the study of a child, involves the study of something immaterial, something elusive, something secret, someto which we owe the greatest reverence; something which may be temporarily or permanently arrested in development, or misdirected by the slightest want of wisdom on our part. Hence the need of caution—hence the lack of sympathy with the movement which has been shown in quarters where the need of caution was most clearly realized—hence the strictures which have been passed in connection with methods which have, or have appeared to have, been wanting in caution.

The chief dangers, and therefore the chief need for caution, seem to me to be concerned with :—

(a) The difficulty of observing children in a systematic and exhaustive way without disturbing the very phenomena we wish to observe, and without interfering with the personality of the child.

(b) The difficulty of finding and of applying suitable common tests to numbers of children in order to obtain general results.

(c) The danger that the spirit of scientific inquiry and the search for truths of general application may render the child student *indifferent* to the interests and *needs of the individual.*

(a) The opponents of child study inquire: "Does it not do harm to the children to be made the objects of observation?" The enthusiasts reply: "In observing the child you practically do nothing to him at all."

For example: Miss Shinn, whose notes on "The Development of a Child" form a valuable contribution to the literature of child-study, says in answer to this objection, "The whole value of an observation is gone as soon as the phenomena observed lose simplicity and spontaneity. Observing is not doing something to the child. No one who has good judgment will allow himself to spoil both the child and his own observation, and any one who has not good judgment will find plenty of ways to spoil a child more potent than observing him."

This seems to savor somewhat of the nature of special pleading. First, Miss Shinn allows that the value of the results of observation depend upon the naturalness and spontaneity of the phenomena. But, she says, in effect no one with good judgment will allow anything to interfere with the naturalness and spontaneity of the phenomena. But what if the phenomena under observation should be, by their very nature, so susceptible to the influence of observation that they can hardly remain simple and spontaneous? This, I believe, to be one of the great difficulties and dangers of child-study. As a difficulty it is not peculiar to study of the human animal. We have all, I suppose, heard the story of the child who was told to observe birds and insects in order to find out their habits, and who complained that they "never had any habits" when he watched them; and more mature students of nature know only too well what patience, caution, and self-control are required before any acquaintance at first hand can be made with the ways of many animals. If the lower animals feel so much the disturbing influence of human observation, is it to be wondered at that children should be affected by it?

I do not say that it is impossible to observe a child in a systematic way for a given purpose without his knowledge, but I do say, and I think most people with much intimate acquaintance with children and children's ways will agree with me, that it is very difficult, and that it calls for great power of tact and self-control. In the case of the mere infant, a good deal of observation can be carried out without the knowledge of the subject observed, but when we come to children beyond the stage of infancy their power of knowing or feeling that their elders are watching what they do, or say, is little short of miraculous.

Now, as soon as a child knows that he is being observed he has a tendency to cease to be natural. This is true, even in the cases when observation does not attempt to go further than the surface. The desire to show off in some children, the self-consciousness of others, distrust of the observer's criticism in natures of a third type,—these and other feelings are apt to come into play and to interfere with the spontaneous flow of thought and action. But something more serious than this may occur if the child supposes that the observer wishes to penetrate below the surface, and, not content with observing what he does, tries to find out why he does it; tries to explore the hidden regions where his secret, tho it may be perfectly innocent, imaginings and speculations dwell. When the observer, in other words, attacks "his innermost personality, his very self."* An anecdote is related of a public school boy who was being prepared for confirmation, and who had been asked certain questions by his headmaster. This boy was overheard to say: "He asked me if I ————. Of course I do, but I said 'No.' What business has he to ask questions like that?" I think we may conclude either that the questions were put in a tactless way, or that they really were of a nature to outrage the boy's sense of sole proprietorship over certain departments of thought and action, for a child will tolerate and forgive much inquisition if he believes that the inquirer does not ask from mere curiosity (or that higher species of curiosity termed "love of knowledge"), but from some motive connected with his (the child's) good, or supposed good.

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* Professor Sully on "The Observation of Some Moral Aspects of Children." *Paidologist*, for July, 1900.

The Sacredness of Individual Thoughts.

Another instance of the way in which children resent the dragging forth of the ideas they look upon as theirs, and theirs only, is given by Professor Earl Barnes.* He prints a story written by a girl of fifteen, with comments by the writer after she had attained middle age. She says that tho she was in the habit of writing both at home and at school, she wrote this story only for herself. "A secret delight filled me as the beautiful dreams grew into something that I could see and read, again and again. In a way, the writing realized my desire to breathe the air of an ideal romantic world."

"A pedagogic application? I would have resented with an angry passion, and I was not easily capable of anger, any attempt to discover or tamper with this precious literature hidden between the covers of the red book that no one else could read. People didn't understand, and it was none of their business; and I am of the same mind yet."

People do not understand, and it is none of their business! This, I feel sure, is the attitude of mind of many children, even when those who love them and understand them best try to look behind the veil which conceals the innermost shrine of every human mind.

Whatever our method, then, of studying the child may be, it is of the very greatest importance that we do not raise up any spirit of opposition by attempts to penetrate to the innermost thoughts and motives which he considers peculiarly his own. Any attempt to do this will either produce deceit, for the child will make false statements to satisfy us; or reserve and loss of spontaneity, for the child will take care not to do, in our presence, anything that would stimulate our inquiries.

(To be continued.)

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*"Studies in Education," Vol. I., pp. 266-269.

How to Study a Poem.*

WITH AN EXAMPLE.

By H. Courthope Bowen, M. A.

THERE are still here and there persons who assert, or in the obscurity of whose minds there lurks the idea, that English literature should not be used as a school subject. When pressed for a reason they are found to hold that if once a subject is used for school purposes it inevitably becomes hateful to children—and doubly so if an examination follows. A very little experience, however, of schools and school-children shows that the idea is untrue. It is merely survival of the dark barbarian days of book and birch. Of course, outside school as well as inside, any subject may be spoilt by clumsy handling—as music can be spoilt on a barrel-organ. But a teacher has to be more than usually unfit for his work if he manages to spoil all a child's pleasure in literature, provided that it is good and suitable, and that he treats it as literature, that is, as the skilful and harmonious expression of thought and feeling.

But turn we from these bold, bad folk, and let us consider the views of those who allow that literature may be introduced with advantage into the class-room. And here we are at once met by two extremes—which, like the buckets of an old well, go up and down alternately, but leave truth lying at the bottom between them. The one would put his poem or prose—often by no means suitable for the young—before the child. The child either understands and appreciates it, or he does not. If he does, you had better not interfere; you can only do harm. If he does not, he is hopelessly stupid; you can do nothing for him. The other, remembering the days of his Latin bondage, gives all his mind to the petty details of grammar, etymology, and antiquarianism, and forgets that his subject is literature. I will call the former the "rapid impressionist" and the latter the "laborious pedant."

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*From the London *Educational Review.*

Now what is the assumption made by the rapid impressionist? We will allow—and it is granting a good deal—that the piece he has chosen is suitable. He assumes that his pupil will understand quickly and spontaneously (1) the author's subject-matter, (2) the author's own attitude towards this, (3) his vocabulary, (4) his statements and allusions, and (5) the trailing cloud of associations which these bring with them, and which in poetry are often of more importance than the direct literal meaning. He cares for the whole and not for the parts. In his eagerness for a result of some kind he neglects the means. He prefers feeling, however vague and ill-informed, to observation and thought.

The laborious pedant, on the other hand, loves learnedness and the small things thereof for their own sakes, and cares little or nothing for the use which may be made of them ; he has a weakness for making collections of the unknown and exceptional—indeed, he revels in exceptions ; he has a trick of explaining the partially known by means of the wholly unknown (as in the derivation of words); he forgets the pupil, the subject, the context, the author, while he labors at a word or a statement, and ends by burying far more than he unearths ; he looks at things singly and in isolation, and cares little for the whole which they together form. Art is not to his mind, nor is feeling. And when he does contemplate using his materials for a building of some kind, he spends all his time in preparing an elaborate and disproportionate foundation, and never gets to the building at all.

You will gather that I do not entirely approve of either of these extremes. But let me go more into details in regard to the points which I mentioned when speaking of the assumptions of the rapid impressionist.

I. The Subject-Matter.

By this I mean not only the surface meaning, the merry story—which may be caught rapidly—but also the ideas dealt with and set forth by means of the imagery and pictures. In a play of Shakespeare's there is the exposition of character and of human life; in Paradise Lost there is the justification of God's ways to man, as there is also in Dante's great poem; in the poem I shall deal with presently there is freedom as a divine force working in nature; and so on. I do not mean merely the allegory, if there is one, but the ideas introduced or lying in the background of the writer's mind, and giving color and tone to his thought and utterance. These are not to be caught and understood by a rapid impression. They need time, observation, and thought. The literature, which for the most part we have to use, was not written for children; and these ideas may prove to be beyond the comprehension and sympathies of the young. If this is so predominantly, then the piece is unsuitable. But often there will be quite enough of what is suitable to make the piece intelligible and interesting. In any case, the teacher must take note of and think out the ideas, and then call attention to, and make clear, such of them as are fitted for his purpose.

II. The Author's Attitude to His Subject.

This may often be quickly gathered; and then a good reader may indicate it by his voice. But sometimes it cannot be seen at a glance. For instance, much fault has been found with Bacon's ethics in his Essays. Undoubtedly, much of what has been called his ethics, if judged as such, is very unsatisfactory. To me ethics without ideals is flat, stale, and unprofitable, and in a sense impossible. But I think that what Bacon had in his mind was sociology not ethics—a scientific account of what is and not the doctrine of what should be. All his life he had been urging us to study actuality rather than tradition—to go to nature and to listen to her many voices, consider her ways, and learn her doings—to observe, to experiment, to think—and he applied his method to the study of man in society. Coldly and without emotion he sets down what he saw. For instance, he saw plenty of dissimulation, and that often, if skilfully managed, it was successful in a worldly way. He says so. We may be out of sympathy with his method ; we may question the accuracy of his observations ; but unless we understand his attitude we shall fail to comprehend him completely. Shakespeare also has his attitude to his subject ; but it differs by a whole heaven from Bacon's. The teacher must understand his author's attitude ; tho he need not always call the attention of his young class directly to it.

III. Words, Phrases, Etc.

A writer's vocabulary may contain obsolete words, unfamiliar words, and, most puzzling of all, familiar words used in an unfamiliar sense. In dealing with such matters the rapid impressionist, thru his habit of catching at the meaning as a whole, may sometimes score a success—tho not unfrequently he goes hopelessly wrong. The laborious pedant, on the other hand, is almost sure to air his learnedness and give us a derivation—which hardly ever helps a child and seldom anyone, except to justify the meaning when found. The question is not what the word meant originally, but what it meant to the writer when he used it. When our laborious friend once catches that idea he scores heavily. Let us take an instance—from Hamlet : "When we have shuffled off this mortal coil." "That," says the rapid commentator, "means when we are dead." "Yes, quite so ; but please explain the metaphor." "Well, evidently it is taken from the idea of a snake's sloughing its skin." "Not so fast," says the plodder. "Coil means skin? Perhaps." So we take down Mrs. Cowden Clark's Concordance, and find that "coil" is used twelve times in the plays ; and in the eleven other cases the context shows clearly that it means confusion, noise—no idea of skin, wrappage, or curl of rope. "Shuffle" is used eight times, and in five of the seven other cases plainly means to practice shifts or tricks, to do in a perfunctory way ; while in the remaining two the meaning is closely similar. One of our cases is from Twelfth Night, "Oft good turns are shuffled off with such uncurrent pay" (*i. e.* thanks). So "shuffle off" means to elude, to get rid of somehow; and our original statement has nothing to do with snakes, but means when we have got rid, in one way or another, of the noisy confusion of our human life. The plodder will go on to investigate the force of "off" in composition. His result confirms our interpretation. So again our hasty friend declares that Shakespeare is using a mixed metaphor when he makes Macduff exclaim "What all my pretty chickens and their dam!" But no—in the Merchant of Venice (III. i. 33) the word dam is again used for a "parent bird"; and if we look into the great New English dictionary we shall find that long ago dam was used for the mother of ducklings, and so on—and even for the female spider—and was variously spelt dam and dame. I might add other examples, but these will be enough to show you how to track down the meaning of a word as used by a particular author in a particular case. No dictionary not framed on historical lines will help you much; nor will etymology. You must collect and compare instances of the word's use by the author, and, if need be, by his contemporaries.

From what I have already said it will be plain, I think, that in my opinion, if we wish to get at an author's full meaning, we must take the trouble to understand the full meaning, the force and beauty, of his metaphors, his similes, and his epithets—for it is in these that his true skill as an artist in expression lies. A metaphor is the substitution of an idea which belongs to one thing for a somewhat similar idea which belongs to another thing. It is of great power in creating pictures. Our whole language is full of metaphors; but a great many are no longer consciously such. Even in these cases it is often well to bring out the underlying meaning clearly. It is always so when the metaphor is consciously used. Similes are always conscious; and so it is even more important to bring out their illustrative and explanatory force. In *studying all great poets,* and especially in the cases of our English Milton and Keats, hurry in this matter is fatal to all true enjoyment and understanding. It is worth while to pause and give the pictures time to form in Milton's "Rose as in dance the stately trees," when describing the creation, or in Shelley's "Beautiful as a wreck of paradise," used in the description of his Ionian Isle. [In the latter case there is a reference to a quaint old legend about the land containing paradise being overwhelmed by the sea—which General Gordon, by the way, took quite seriously.] It would seem hardly necessary to lay stress on the need for carefully noting the epithets or descriptive words used, were it not that our rapid friend seldom has time for such things, while our plodder is apt to be ruthlessly learned over them. Who that has read Homer or Vergil, or—to come to more modern times—Keats and Tennyson, can forget how "all the chosen coin of fancy" is often to be found flashing out from the epithet! "All the charm of all the Muses often flowering in a lonely word." I dare not allow myself to quote instances; but I strongly advise the teacher to record such when he finds them, and think out why they are so attractive. It is particularly important for us teachers to attend to epithets in face of the careless and inexact way in which they are commonly applied in conversation and in the daily press; and also because of the tendency, prevalent amongst, but not confined to, the young, to make one poor epithet or adverb do the work of almost every other—*e. g.*, "nice" as used by girls, and "awfully"—a fault arising from laziness or lack of thought.

IV. Statements and Allusions.

No doubt commentators, hasty or slow, do pay some attention to an author's statements; but the former are too much given to jumping to conclusions, while the latter are too much given to assuming that they have made everything clear when they have explained some unfamiliar word. Their commonest fault, however, is taking it for granted that the children understand the real force of the statement—a fault peculiarly to be deplored in the study of dramatic literature. How seldom do we find that our pupils grasp at once and understand the statement "The quality of mercy is not strained." There are two hard words in it—the harder because seemingly so familiar—but there is also the context. "Quality," we shall find by the help of our concordance, is used, commonly but not always, in the sense of essential characteristic or that which makes a thing what it is. Similarly we find that "strained" may mean constraint. Now for the context—Portia has said, "Then must the Jew be merciful." To which Shylock snaps back, "on what compulsion must I?" And Portia, in that last splendid appeal to the man whom even yet she cannot believe to be as cruel as he pretends to be, answers, "The quality of mercy is not strained," that which makes mercy mercy is the absence of constraint or compulsion; it drops as naturally, as gently, as refreshingly as the rain from heaven. And so on. The context clinches the meaning. But here is another case wherein every word is simple and familiar —when Wordsworth speaks of hearing "The still, sad music of humanity." Our pupils understand "music" and "humanity," but will they at once understand "music of humanity" and why Wordsworth says that to him it is "always sad"? I think not. (For "music of humanity" compare "music of the spheres"—the sound which the planets make as they move in obedience to the cosmic laws of their being and in fulfilment of their destiny. Wordsworth had shared the high hopes which preceded the French revolution. It had come and with it "The Red Terror." Moreover, he was constitutionally inclined to look upon mankind in the mass as rather a sorry spectacle.)

With regard to allusions, I would point out that there are two things to learn—first, the source and meaning of the allusion, and second, the bearing of the allusion on the context in which it is used. The former i generally attempted, and our laborious friend has grand opportunity for airing his unnecessary learnedness. See for example the note on the jewel in the toad's head in the Clarendon Press edition of "As You Like It." The latter point is almost always omitted. As an instance, only lately reformed, let us take Hamlet's remark "It out-herods Herod." We used to be given a learned note about Herod (not always the right Herod) and the massacre of the innocents. But this threw no light on the use of the phrase. The fact is that the reference is to the Herod of the miracle plays, a stock ranting and roaring character, and a great favorite with the groundlings—and the meaning is it out-rants the greatest ranter.

V. Associations.

Words as well as things have associations for all of us, some of these being purely personal, peculiar to ourselves, and some nearly or entirely general. The skilled artist in words is keenly alive to this, and by this very means produces some of his most beautiful effects. The associations of daintiness, fragrance, and delicacy of color with the "rose" add a very special charm to Keats' description of Madeline falling asleep in her soft cool nest "as tho a rose should shut and be a bud again" —the "bud" itself suggesting youth and innocence. There are associations of grace and gentleness with the term "maiden" which the term "girl" somehow lacks. The "nurse of ninety years" in Tennyson's dirge suggests venerableness and long experience of domestic life. While who shall count all that is called up by that gentle word "home"! The association sometimes takes such hold upon a word that it incorporates itself with the meaning and may even change the meaning altogether. No maiden would like to be called "silly" now-a-days. Yet Spenser could find no fitter epithet for his holy maiden Una. But even in Spenser's time the popular imagination had already begun to associate the idea of weak-mindedness with much that paraded itself as holiness or with what was simple and artlessly happy. And so the word fell from its nobler meaning —just as "simpleton" also did. (The German word "selig" also has acquired the meaning of deceased or of happy memory.) But I have said enough, I think, to show you that we who would study literature as the skilled expression of thought and feeling must not by any means ignore these associations.

I shall now take a short poem of Tennyson's and show you how I should prepare myself in it before using it with a class of children of, say, eleven or twelve years of age. My object is to let you see the nature of my proceeding—not to dogmatize or thrust my interpretations upon you. I worked at the poem in the manner I shall explain, and it came to mean to me what I shall state—but it may not have quite the same meaning to anyone else. I will read it to you first:

Of old sat Freedom on the heights,
  The thunders breaking at her feet;
Above her shook the starry lights:
  She heard the torrents meet.

There in her place she did rejoice,
  Self-gathered in her prophet-mind,
But fragments of her mighty voice
  Came rolling on the wind.

Then stept she down thro' town and field
  To mingle with the human race,
And part by part to men reveal'd
  The fullness of her face—

Grave mother of majestic works,
  From her isle altar gazing down,
Who, God-like, grasps the triple forks,
  And, king-like, wears the crown:

Her open eyes desire the truth,
  The wisdom of a thousand years
Is in them. May perpetual youth
  Keep dry their light from tears;

That her fair form may stand and shine,
  Make bright our days and light our dreams,
Turning to scorn with lips divine
  The falsehood of extremes!

Were I going to describe the lesson as actually given, I should now have to speak of its five steps or stages. But I am dealing with the preliminary preparation only, and so I pass them by. I will, however, remind you that the first step is to prepare the children for the coming subject matter and the poet's attitude towards it. We must find out what the children already know about freedom, and add such information as is necessary. Tennyson's idea of freedom is found in most of his works. Briefly it is that perfect freedom lies in perfect service to what is noblest and best. But we shall find enough for our present purpose, I think, in the two poems, "You Ask me Why, Tho' Ill at Ease," and "Love Thou Thy Land with Love Far-brought." We will master the contents of these carefully before we begin our introductory conversation—the aim of which is to turn the attention of the class in the right direction and strike the right key-note. And now for the poem itself. Suppose me thinking aloud, not teaching. "Of old sat Freedom on the heights." Freedom is no modern human invention, but a divine force in the world from the first. From the beginning of things she sat on the heights—far above us—to be looked up to, reverenced. The idea of looking up to anything above us suggests reverence at once. "The thunders breaking at her feet"—note the suggestion of awe and majesty, the supremacy over mere elemental forces. Note the plural "thunders"—the clouds are spread out below like a sea, and the noise is like that of a succession of billows breaking on the shore. "Above her shook the starry lights"—there are no clouds to obstruct her view of the wide spaces of heaven—she is above the clouds and the thunder. The stars are vibrating above—not twinkling, for that would bring in associations of pettiness. But why "shook"? I take down the Tennyson concordance—unfortunately complete down to 1868 only. The word is somewhat of a favorite with Tennyson. Here are some quotations to help us :

"The maiden splendors of the morning star
Shook in the steadfast blue."—(*D. of F. Wom.*, 56.)
" (Eyes) brighten like the stars that *shook*
Between the palms of paradise."—(*In Mem.*—Con.)
"The long light *shakes* across the lakes."—(*Princ.* IV.)

And so on. Plainly the meaning is vibrates or quivers. I am reminded of the idea I met with somewhere that the stars flare in the stress of the great creative wind that blows thru all the worlds. "She heard the torrents meet."—One of the most impressive sounds in the lofty mountain solitudes is the sound of distant streams or falling water. It gives one a sense of vastness—referred to by Tennyson more than once—*e. g.*, "Far off the torrent called me from the cleft" (*Œnone*).

"There in her place she did rejoice." In her place—that is an unusual phrase. Does it mean in the place which rightly was hers, or does it mean simply where she was? I must consult the concordance. I find the phrase used fairly frequently, especially in the earlier poems. For instance,

"The battle deepen'd *in its place*."—(*Oriana.*)
"In *its place* my heart a charmed slumber keeps."—(*Eleanore.*)
"The flower ripens *in its place*."—(*Lotos-Eaters.*)
" (She) spoke slowly *in her place*."—(*D. of F. Wom.*)
"*In her still place* the morning wept."—(*Two Voices.*)
"Fair is the cottage *in its place*."—(*Requiescat.*)

And so on. Plainly the second meaning is the right one—and I remember a similar phrase in "Lady Clare"—"he turned and kiss'd her where she stood." The phrase has a classical flavor; but I will leave it to our laborious friend to track it down. Here we do not want the origin but the meaning. "Self-gather'd in her prophet-mind"—with all her powers drawn together under the control of her mind which foreknew the future. Tennyson, differing somewhat from Browning, sets great store by self-control:

"Self-reverence, self-knowledge, *self-control*,
These three alone lead life to sovereign power."—(*Œnone.*)
"Faith that comes of *self-control*."—(*In Mem.*)

which are strong and dry, are better for seeing with. One is inevitably reminded of Bacon's quotation from "Heraclitus" that "dry light is ever the best"—meaning light not suffused by the humors of the affections.

"That her fair form may stand and shine"—that is, remain firmly placed, shining like a beacon light to guide us. "Light our dreams" by filling them with cheerful and radiant hopes and imaginations—or perhaps merely show our dreams which way to move. "The falsehood of extremes" was peculiarly hateful to Tennyson, and he never tires of enforcing the lesson. In this view he resembles Shakespeare, who believes in the golden mean. The best of things may be carried to extremes and so become corrupted; and then as philosophers tell us, and as we ourselves know, the corruption is worst of all. We can illustrate from our own and the children's experience.

Should I impart all this to my class? I cannot say till I know my class. I certainly should not attempt anything which I found to be quite outside its circle of thought and sympathy, and not to be brought inside that circle without very serious difficulty; or anything which the time allotted would not allow me to accomplish fairly. Everything in fact depends upon the children. The teacher need not impart all that he knows and thinks, but only just so much, of such a kind as the children can take in and assimilate. Whether his children be old or young, however, he should always himself thoroly understand and appreciate the poem or prose piece, otherwise his teaching, on whatever scale it be designed, is sure to be poor. Complete mastery, of the kind I have described, is the first requisite for giving a good lesson. For the details of the actual teaching I must refer you to what I have written elsewhere. Here I will only remind you of the general order of such a lesson. First there is the preparing of the children's minds to receive the new information so that it may be taken in readily; then there is the imparting of the new information, the modes of doing which are various; then there is the working up of the new information and the old knowledge so as to produce assimilation; then there is the endeavor to derive from this worked-up material some ideas more or less general; and lastly, there is the application, whenever possible, of these general ideas to particular cases known to us. The whole lesson may be arranged in these stages, or the stages may be repeated for each definite section. (The above poem readily divides itself exactly into halves.) I have already spoken of the first stage. I will conclude with a word or two on the last.

The applications are not always easy to make. When the ideas are ethical we are sometimes told that the children should be led to apply them to their own lives and the lives of those about them. I think there often is in this a serious danger, that we may make the children priggish and self-righteous. The attitude of fault-finder and judge is not a healthy one for a little child. I would trust rather to the domains of history and fiction for any applications, and keep the personal and immediate applications for occasions less public than those of the class-room. Some ideas may be in a sense applied, or made use of, by hunting for good illustrative examples, or parallel passages from other writers; while, when the ideas are esthetic or pictorial, they may be used as the subjects of little pictures drawn by the children—not necessarily work of art, but rather the translation of word-speech into picture-speech. Work of this kind is of great value in giving definiteness to the children's ideas and mental pictures, and enables the teacher, as nothing else can, to learn exactly what the passage or poem had really meant to each child. No matter how poor and clumsy the drawing may be, it will be of great value educatively. You will not, of course, laugh or smile too meaningly at the childish and grotesque attempts till the little people have left the room; nor will you allow the children to make fun of one another's efforts *unduly.*

Education in the Appreciation of Art.*

By CHANCELLOR WILLIAM BAYARD CRAIG, of Drake University, Iowa.

IN the operations of nature man perceives truth and by the aid of reason produces science; he perceives truth as it relates to character and conduct, and under the imperatives of conscience produces ethical systems of religion; he perceives truth as beauty, and under the sway of joy or other emotion, produces art.

It is not necessary to decide which of these three forms of human activity is the most important in full and highly developed civilization, it is enough that each is essential.

In our young and vigorous country we are great in science, respectable in religion, and weaklings in art. We have been too busy with the useful and practical in the material development of our new country to know or care much about art.

In the matter of government we have discovered foundation principles and know how to talk about the rights of man and the functions of the state. An average American citizen feels himself competent to appraise the values of the various elements that enter into the ceremonial and pageantry of the coronation of a king. He is no longer overawed by the traditions and claims of hereditary monarchs. He is a fearless critic in political science.

It is a different matter, however, when the same average American citizen is asked to give his opinion of a work of art, a painting by Corot or Millet; a figure by French or St. Gaudens; or a building by Richardson or Meyer. All self-reliance and boldness are gone. He will probably utter a phrase of fashionable criticism, or, if he ventures an original remark, will pass on with a horrible feeling of uncertainty, fearing lest he has said something flat, ridiculous, or both.

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*Address delivered before the Department of Higher Education, *N. E. A., July 11.*

The fact is that in art matters the American people are in the provincial period. We are not appreciative students of art production and values, and will not have opinions of our own until we are delivered from slavery to conventional traditions by learning and applying for ourselves the first principles of art.

We must be able to write a declaration of independence in the realm of art as we have in the realm of politics. This is the essential beginning for a great national art that shall be expressive of the larger life, the new conditions, and modern ideals of our American civilization.

In art development, as in everything else of a broad national character we must lay the foundation in the hearts and minds of the common people. It is not true that our meager development in art is a racial defect. Art is not the birthright alone of the Latin peoples. It may be granted that the Italians, French, and Spaniards are more emotional in temperament, more sensitive to the appeal of beauty, more responsive to the efforts of their artists and thus more easily stimulated to the point where art production begins. But the English speaking race are also, in their own characteristic manner, profoundly artistic. Chaucer sang of the common life of a practical people in a way that leaves no doubt as to the art impulse in the English heart. The English blood was warmed by intermixture with the original Celts in the island of Great Britain, by the later invasion of Celts from the Continent, and by the conquest of England by the Latinized Normans. This intermingling produced a new and powerful race, that gave the world not only the splendid pages of achievement and conquest in the times of Elizabeth, but also that unequaled chorus of singers and writers who group around the peerless Shakespeare. As the race of English speaking people have spread out to the East in Australia and to the West in America, their power and artistic genius have become more and more conspicuous. There is no room to doubt their *large capacity for art* appreciation and production.

In our own land the poets of New England, the novelists of the South, the sculptors of the West, the painters of New York, the White City on the inland sea that arose as by enchantment, more beautiful than a dream, are all sure prophecies of the coming glory of American art.

How can it be otherwise? We are young and enthusiastic. Our ideals are high, our love of the beauty of nature profound and sincere, our feelings deep and strong. When we turn our attention seriously to the study and production of art we shall greatly excel.

Need of Art Appreciation.

In a republic where opportunities for education and culture are provided for all, education in the appreciation of art should be a part of the educational scheme, and this must be done before we can have a truly national art at all, *i. e.*, an art that expresses the deepest heart yearnings and ideals of the whole people.

Indeed it may well seem to the wise student of our national life, that our civilization is seriously defective just at this point. We are in a new land with vast undeveloped resources and the lust of conquest possesses us. With machines of power and efficiency we are opening up our rich resources, the grime of our arduous toil is upon us, too often our minds and our souls are smirched by our slavery to the mill, the workshop, and the store, and we lose sight of the fact that there is something else to do in this world besides money making and its machinery. As a nation we seem to need the inclination and ability to see the vision of the artist and know how to read and appreciate the symbols by which he would impart to us the message of his heart, that he may minister to the joy and fulness of life.

An appreciation of art would open up a new channel for the amazing vigor and energy of our people, would open up for the slaves of labor,—whether capitalist or workman—new fields of interest and pleasure, and in *every way* soften and adorn the hard and ruder spaces of life. Poverty would be enriched by discovering new sources of inspiration and pleasure at the free and bountiful table of nature with its cloth of green spangled with "daisies" and "buttercups" under the azure pavilion of the God of beauty and of love. The sordid money getter, swollen with pride because of his success in the scramble for gold, would find a new life with new meanings when first enabled to buy with his money one real work of art for which a genuine appreciation had been awakened in his soul. It would keep the heart young and simple and sincere. It would preserve that invaluable something, that was in the heart of Wordsworth when he said :—

"My heart leaps up when I behold
A rainbow in the sky :
So was it when my life began,
So is it now I am a man,
So be it when I shall grow old
Or let me die."

We are the wealthiest people of the world and the most intelligent, but the serious question yet remains, are we not still barbarians until we learn to appreciate the world of beauty—the realm of art.

We have made hopeful beginnings in the right direction, we have many schools of design and teachers of drawing. In some of our larger cities, especially in Denver, Colorado, the cultured people are beautifying the school-rooms with works of art and striving as best they can to awaken and nourish delight in the beautiful. We are talking about the city beautiful. There are signs of a general awakening to the importance of the claims of the artist and doubtless the movement will increase in power, because truth is on its side, until we shall have methods and teachers and text-books adequate to the results to be achieved.

Tolstoi's book "What is Art?", is given to the world by its author, as the ripe result of fifteen years of study. The book abounds in peculiar marks of the genius of this great writer. All his conclusions will not be accepted as sane and satisfactory, but the work is rich in helpful suggestions.

He strips the subject of all perplexities and confusing verbiage, he emancipates the reader from the spell of tradition or the tyranny of the conventional and brings the student face to face with the character and function of a true art product.

After quoting definitions from all the great writers since Aristotle, and noting their merits and defects, he offers his own definition of art as better than any of them and undoubtedly he is right.

He says, "Art is a human activity, consisting in this, that one man consciously, by means of certain external signs, hands on to others feelings he has lived thru, and that other people are moved by these feelings and also experience them."

When one is able to grasp the full significance of this definition, the hitherto mysterious and complex world of art becomes simple and plain, a grammar school student can understand it.

The artist consciously expresses feelings that he has lived thru, in such a way, that others experience the same feeling. That is a somewhat broader and fuller statement of a long familiar doctrine, viz., that "Art is the language of feeling." This is fundamental truth. The artist constructs a body out of words, lines, colors, clay, or other media and out of his own emotional experience, out of his own fulness of inspiration, breathes into the form he has created the breath of life and it becomes a living work of art.

Without this feeling imparted by the true artist, all high sounding words, all deft combinations of lines, all splendor of color, all skilled manipulation of keys or strings, are dead things, like artificial palms and roses. Mere dexterity in handling material is not art in this high and true sense. Skill in technique is merely a refined form of mechanics unless a genuine emotion of the heart is behind it all, seeking to impart itself to the heart and life of others.

When a student grasps this truth he becomes at once conscious of power in himself in the matter of art appreciation. He has learned to ask the first and all-important question concerning art production, viz., Does the artist express in it a true emotion, in such a way, that I am made to feel it with him?

A student is enabled by Tolstoi's help to make this good beginning in art appreciation without considering the elements of beauty in art at all and I agree fully with him, that the supreme aim of the artist is not to make a beautiful thing, his sole object must be to express the emotion that controls him, and beauty will take care of itself.

What is beauty? The great writers on art have been trying to answer that question ever since the days of Plato and the best they have to give us is this:

"Beauty is that which pleases." The whole subject is remanded to the verdict of the individual. That which pleases your sense of beauty is to you beautiful.

There are a host of other definitions but they can all be classified in two groups, one declaring there is no beauty in the world, it is only in the beautiful soul—Idealism; the other declaring beauty to consist in lines, in proportion, in relation—Materialism.

Ruskin and many of the great writers on art combine these extremes and see the beautiful in the divine idea—the soul of all things, and also see the beautiful in the material body that the soul or the idea weaves for itself. This seems to be the only satisfactory view of the whole matter.

The mountain columbine nodding in some nook of the high Sierras is the expression of a beautiful idea, but it would be beautiful in form and color if no human soul ever saw it. In the law and outworking of its being it is true, beautiful, and good, entirely independent of any apprehension or comprehension of man.

The indwelling divine life in man recognizes the indwelling divine life in flower, bird, and tree—in every form of life, and is conscious of fellowship. The pleas-

And many another example might be given. The "fragments of her mighty voice" are the parts of the great lesson which freedom had to deliver to mankind, but of which mankind as yet could understand only a little here and a little there. "Came rolling on the wind"—came borne by the wind with the deep continuous echoing rumble of thunder or of organ music. The word roll is a great favorite of Tennyson's, as of other poets.

"I hear a wizard music *roll.*'—(*In Mem.*)
"*Roll'd* she psalm to wintry skies."—(*In Mem.*)
("The great organ) *rolling* thro' the court
A long melodious thunder."—(*Princ.*)
"So all day long the noise of battle *roll'd.*"—(*Morte d'A.*)
"*Roll* and rejoice jubilant voice,
Roll like a ground-swell dash'd on the strand."—(*To Alex.*)

And so on. Note the suggestion of majesty and strength. Then Freedom, leaving her mountain solitudes, came down and mingled with mankind, and gradually revealed to them her face (*i. e*,, her true meaning-till it was to be seen completely. For "fulness of her face" compare

"When all the *full-faced* presence of the gods
Ranged in the halls of Peleus."—(*Ænone.*)
"Glowing a *full-faced* welcome."—(*Princ.*)

—the idea being the full revelation of self without disguise of any kind.* Note that the revelation is not sudden, but a slow, orderly process. A gradually evolved progress according to nature and to law is a favorite idea of Tennyson's. So England, he says, is a land

"Where freedom slowly broadens down
From precedent to precedent."

"Grave mother of majestic works."—To Tennyson, Freedom does not seem to be a fantastically dressed

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*Tennyson is very fond of compound words formed with "*full*"—full-breasted, full-busted, full-flowing, full-limbed, full-*tided, full-toned, full-tuned*, etc.

girl in a Phrygian shepherd's cap, but a serious and noble mother, the inspirer and the source of noble works. In the poem just quoted she is sober-suited Freedom," and again in the "Ode on the Death of the Duke of Wellington" the epithet is "sober." Suddenly, by a dexterous turn Freedom becomes Britannia, with the isle of England for her altar, from above which she gazes down on us her children and her worshipers. In her hand she grasps the three-pronged trident of Neptune, god of the sea, and on her brow she wears no mere ornament, but the kingly crown of power and governance.

"Her open eyes desire the truth"—Her eyes show by their openness, their frankness and fearlessness, that she desires the truth and no shams and pretences. I am reminded of Keats' words in "Hyperion"—

> "To bear all naked truths,
> And to envisage circumstance, all calm,
> That is the top of sovereignty."*

Note the association of frankness, sincerity, and innocence with "open," and especially with the "open eye." Artists paint cherubs commonly with eyes wide open; Pallas Athena is represented with fully-opened eyes (*Ænone*); and so on—one need not multiply examples. The "thousand years" may mean vaguely a very large number of years, or roughly the time which has elapsed since Egbert united all England under his sway. The eyes of the old are apt to be moist at times, and with the advance of life sorrow is apt to bring tears into them; and when the eyes are full of moisture we see things (actually and also metaphorically) ill and blurred. The eyes of the young, which have not wept much, which are strong and dry, are better for seeing with. One is inevitably reminded of Bacon's quotation from "Heraclitus" that "dry light is ever the best"—meaning light not suffused by the humors of the affections.

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* Thruout, the ideas dealt with may well be illustrated from the writings of others besides the author himself. I have refrained from doing so here, to any great extent, partly because of the time at my disposal, and partly because the illustrations —when not actually needed for purposes of interpretation—had better come after the lesson has been given. A hunt for them is both interesting and instructive, and may sometimes be set as a home lesson for the older children.

"That her fair form may stand and shine"—that is, remain firmly placed, shining like a beacon light to guide us. "Light our dreams" by filling them with cheerful and radiant hopes and imaginations—or perhaps merely show our dreams which way to move. "The falsehood of extremes" was peculiarly hateful to Tennyson, and he never tires of enforcing the lesson. In this view he resembles Shakespeare, who believes in the golden mean. The best of things may be carried to extremes and so become corrupted; and then as philosophers tell us, and as we ourselves know, the corruption is worst of all. We can illustrate from our own and the children's experience.

Should I impart all this to my class? I cannot say till I know my class. I certainly should not attempt anything which I found to be quite outside its circle of thought and sympathy, and not to be brought inside that circle without very serious difficulty; or anything which the time allotted would not allow me to accomplish fairly. Everything in fact depends upon the children. The teacher need not impart all that he knows and thinks, but only just so much, of such a kind as the children can take in and assimilate. Whether his children be old or young, however, he should always himself thoroly understand and appreciate the poem or prose piece, otherwise his teaching, on whatever scale it be designed, is sure to be poor. Complete mastery, of the kind I have described, is the first requisite for giving a good lesson. For the details of the actual teaching I must refer you to what I have written elsewhere. Here I will only remind you of the general order of such a lesson. First there is the preparing of the children's minds to receive the new information so that it may be taken in readily; then there is the imparting of the new information, the modes of doing which are various; then there is the working up of the new information and the old knowledge so as to produce assimilation; then there is the endeavor to derive from this worked-up material some ideas more or less general; and lastly, there is the application, whenever possible, of these general ideas to particular cases known to us. The whole lesson may be arranged in these stages, or the stages may be repeated for each definite section. (The above poem readily divides itself exactly into halves.) I have already spoken of the first stage. I will conclude with a word or two on the last.

The applications are not always easy to make. When the ideas are ethical we are sometimes told that the children should be led to apply them to their own lives and the lives of those about them. I think there often is in this a serious danger, that we may make the children priggish and self-righteous. The attitude of fault-finder and judge is not a healthy one for a little child. I would trust rather to the domains of history and fiction for any applications, and keep the personal and immediate applications for occasions less public than those of the class-room. Some ideas may be in a sense applied, or made use of, by hunting for good illustrative examples, or parallel passages from other writers; while, when the ideas are esthetic or pictorial, they may be used as the subjects of little pictures drawn by the children—not necessarily work of art, but rather the translation of word-speech into picture-speech. Work of this kind is of great value in giving definiteness to the children's ideas and mental pictures, and enables the teacher, as nothing else can, to learn exactly what the passage or poem had really meant to each child. No matter how poor and clumsy the drawing may be, it will be of great value educatively. You will not, of course, laugh or smile too meaningly at the childish and grotesque attempts till the little people have left the room; nor will you allow the children to make fun of one another's efforts *unduly.*

Education in the Appreciation of Art.*

By CHANCELLOR WILLIAM BAYARD CRAIG, of Drake University, Iowa.

IN the operations of nature man perceives truth and by the aid of reason produces science; he perceives truth as it relates to character and conduct, and under the imperatives of conscience produces ethical systems of religion; he perceives truth as beauty, and under the sway of joy or other emotion, produces art.

It is not necessary to decide which of these three forms of human activity is the most important in full and highly developed civilization, it is enough that each is essential.

In our young and vigorous country we are great in science, respectable in religion, and weaklings in art. We have been too busy with the useful and practical in the material development of our new country to know or care much about art.

In the matter of government we have discovered foundation principles and know how to talk about the rights of man and the functions of the state. An average American citizen feels himself competent to appraise the values of the various elements that enter into the ceremonial and pageantry of the coronation of a king. He is no longer overawed by the traditions and claims of hereditary monarchs. He is a fearless critic in political science.

It is a different matter, however, when the same average American citizen is asked to give his opinion of a work of art, a painting by Corot or Millet; a figure by French or St. Gaudens; or a building by Richardson or Meyer. All self-reliance and boldness are gone. He will probably utter a phrase of fashionable criticism, or, if he ventures an original remark, will pass on with a horrible feeling of uncertainty, fearing lest he has said something flat, ridiculous, or both.

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*Address delivered before the Department of Higher Education, *N. E. A., July 11.*

The fact is that in art matters the American people are in the provincial period. We are not appreciative students of art production and values, and will not have opinions of our own until we are delivered from slavery to conventional traditions by learning and applying for ourselves the first principles of art.

We must be able to write a declaration of independence in the realm of art as we have in the realm of politics. This is the essential beginning for a great national art that shall be expressive of the larger life, the new conditions, and modern ideals of our American civilization.

In art development, as in everything else of a broad national character we must lay the foundation in the hearts and minds of the common people. It is not true that our meager development in art is a racial defect. Art is not the birthright alone of the Latin peoples. It may be granted that the Italians, French, and Spaniards are more emotional in temperament, more sensitive to the appeal of beauty, more responsive to the efforts of their artists and thus more easily stimulated to the point where art production begins. But the English speaking race are also, in their own characteristic manner, profoundly artistic. Chaucer sang of the common life of a practical people in a way that leaves no doubt as to the art impulse in the English heart. The English blood was warmed by intermixture with the original Celts in the island of Great Britain, by the later invasion of Celts from the Continent, and by the conquest of England by the Latinized Normans. This intermingling produced a new and powerful race, that gave the world not only the splendid pages of achievement and conquest in the times of Elizabeth, but also that unequaled chorus of singers and writers who group around the peerless Shakespeare. As the race of English speaking people have spread out to the East in Australia and to the West in America, their power and artistic genius have become more and more conspicuous. There is no room to doubt their large capacity for art appreciation and production.

In our own land the poets of New England, the novelists of the South, the sculptors of the West, the painters of New York, the White City on the inland sea that arose as by enchantment, more beautiful than a dream, are all sure prophecies of the coming glory of American art.

How can it be otherwise? We are young and enthusiastic. Our ideals are high, our love of the beauty of nature profound and sincere, our feelings deep and strong. When we turn our attention seriously to the study and production of art we shall greatly excel.

Need of Art Appreciation.

In a republic where opportunities for education and culture are provided for all, education in the appreciation of art should be a part of the educational scheme, and this must be done before we can have a truly national art at all, *i. e.*, an art that expresses the deepest heart yearnings and ideals of the whole people.

Indeed it may well seem to the wise student of our national life, that our civilization is seriously defective just at this point. We are in a new land with vast undeveloped resources and the lust of conquest possesses us. With machines of power and efficiency we are opening up our rich resources, the grime of our arduous toil is upon us, too often our minds and our souls are smirched by our slavery to the mill, the workshop, and the store, and we lose sight of the fact that there is something else to do in this world besides money making and its machinery. As a nation we seem to need the inclination and ability to see the vision of the artist and know how to read and appreciate the symbols by which he would impart to us the message of his heart, that he may minister to the joy and fulness of life.

An appreciation of art would open up a new channel for the amazing vigor and energy of our people, would open up for the slaves of labor,—whether capitalist or workman—new fields of interest and pleasure, and in *every* way soften and adorn the hard and ruder spaces of life. Poverty would be enriched by discovering new sources of inspiration and pleasure at the free and bountiful table of nature with its cloth of green spangled with "daisies" and "buttercups" under the azure pavilion of the God of beauty and of love. The sordid money getter, swollen with pride because of his success in the scramble for gold, would find a new life with new meanings when first enabled to buy with his money one real work of art for which a genuine appreciation had been awakened in his soul. It would keep the heart young and simple and sincere. It would preserve that invaluable something, that was in the heart of Wordsworth when he said :—

"My heart leaps up when I behold
A rainbow in the sky :
So was it when my life began,
So is it now I am a man,
So be it when I shall grow old
Or let me die."

We are the wealthiest people of the world and the most intelligent, but the serious question yet remains, are we not still barbarians until we learn to appreciate the world of beauty—the realm of art.

We have made hopeful beginnings in the right direction, we have many schools of design and teachers of drawing. In some of our larger cities, especially in Denver, Colorado, the cultured people are beautifying the school-rooms with works of art and striving as best they can to awaken and nourish delight in the beautiful. We are talking about the city beautiful. There are signs of a general awakening to the importance of the claims of the artist and doubtless the movement will increase in power, because truth is on its side, until we shall have methods and teachers and text-books adequate to the results to be achieved.

Tolstoi's book "What is Art?", is given to the world by its author, as the ripe result of fifteen years of study. The book abounds in peculiar marks of the genius of this great writer. All his conclusions will not be accepted as sane and satisfactory, but the work is rich in helpful suggestions.

He strips the subject of all perplexities and confusing verbiage, he emancipates the reader from the spell of tradition or the tyranny of the conventional and brings the student face to face with the character and function of a true art product.

After quoting definitions from all the great writers since Aristotle, and noting their merits and defects, he offers his own definition of art as better than any of them and undoubtedly he is right.

He says, "Art is a human activity, consisting in this, that one man consciously, by means of certain external signs, hands on to others feelings he has lived thru, and that other people are moved by these feelings and also experience them."

When one is able to grasp the full significance of this definition, the hitherto mysterious and complex world of art becomes simple and plain, a grammar school student can understand it.

The artist consciously expresses feelings that he has lived thru, in such a way, that others experience the same feeling. That is a somewhat broader and fuller statement of a long familiar doctrine, viz., that "Art is the language of feeling." This is fundamental truth. The artist constructs a body out of words, lines, colors, clay, or other media and out of his own emotional experience, out of his own fulness of inspiration, breathes into the form he has created the breath of life and it becomes a living work of art.

Without this feeling imparted by the true artist, all high sounding words, all deft combinations of lines, all splendor of color, all skilled manipulation of keys or strings, are dead things, like artificial palms and roses. Mere dexterity in handling material is not art in this high and true sense. Skill in technique is merely a refined form of mechanics unless a genuine emotion of the heart is behind it all, seeking to impart itself to the heart and life of others.

When a student grasps this truth he becomes at once conscious of power in himself in the matter of art appreciation. He has learned to ask the first and all-important question concerning art production, viz., Does the artist express in it a true emotion, in such a way, that I am made to feel it with him?

A student is enabled by Tolstoi's help to make this good beginning in art appreciation without considering the elements of beauty in art at all and I agree fully with him, that the supreme aim of the artist is not to make a beautiful thing, his sole object must be to express the emotion that controls him, and beauty will take care of itself.

What is beauty? The great writers on art have been trying to answer that question ever since the days of Plato and the best they have to give us is this :

"Beauty is that which pleases." The whole subject is remanded to the verdict of the individual. That which pleases your sense of beauty is to you beautiful.

There are a host of other definitions but they can all be classified in two groups, one declaring there is no beauty in the world, it is only in the beautiful soul—Idealism ; the other declaring beauty to consist in lines, in proportion, in relation—Materialism.

Ruskin and many of the great writers on art combine these extremes and see the beautiful in the divine idea—the soul of all things, and also see the beautiful in the material body that the soul or the idea weaves for itself. This seems to be the only satisfactory view of the whole matter.

The mountain columbine nodding in some nook of the high Sierras is the expression of a beautiful idea, but it would be beautiful in form and color if no human soul ever saw it. In the law and outworking of its being it is true, beautiful, and good, entirely independent of any apprehension or comprehension of man.

The indwelling 'divine life in man recognizes the indwelling divine life in flower, bird, and tree—in every form of life, and is conscious of fellowship. The pleasng in nature causes joy in the heart of man and calls upon him for utterance and interpretation. The artist does not copy nature, he communes with it, he reveals its real life. The picture or the poem is a living thing like a tree or a mountain and the same divine forces uphold both. The form that truth weaves for itself in the process of nature or by the hand of the inspired artist, is pleasing—is beautiful. The beautiful is able to take care of itself.

We may then agree with Tolstoi, that beauty is not the end for which the artist works, his aim must be first and last and all the time to express the feeling that possesses him, but beauty is inevitable in the true art product; it fits the ideas of the artist and belongs to them as the body belongs to the soul.

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In primitive conditions the feeling that inspires art is the overwhelming fact. The technique of art is in its crudest and simplest beginnings. In our own times, skill in the manipulation of materials used in art expression, is the overwhelming fact and the feeling often weak or conventional. Much that is called art to-day is merely a show of skill in technique, it does not reach the heart or arouse emotion. When one has learned to eliminate from the vast array of art products, the large number of pictures, statues, and compositions that have no special value except as exhibitions of technical skill in handling material he will find the whole art problem simplified and comprehensible. He will no longer be enslaved by the pretensions of the schools or the dominion of the conventional.

In Millet's "Sower," in his "Man With the Hoe," in his "Angelus," the feeling is so simple, sincere, and strong that all the world responds. It is great art. These pictures tell with wonderful power the tragedy of the life of the peasant who conquered the ground with the hoe. Note how earth and sky harmonize with the subdued garb of the figures. You feel that this painter was under the dominion of a strong abiding sympathy with his theme from beginning to end; more than that, you feel that the picture tells of a profound experience in the heart of the artist. He never forgot his text in a single line, he could not.

Turn from Millet to Corot, here again feeling is the dominant note; in some indescribable way the artist has made light and shade; the air; the mass of the trees, tell a wondrous story of the divine beauty that breathes in the landscape at morning, noon, and night, yet both Millet and Corot were old men before honor and praise came to them. The artists of Paris scorned and ridiculed the heavy awkward figures, the dull colors, and the lack of brilliant technique in Millet's work. He had disregarded the traditions of the technique prevailing in the Paris schools, he had chosen his own way to express himself, and had to wait until the great heart of unsophisticated humanity found him. It was much the same in the case of Corot. So it was with Burns, as in his own simple, homely way he told the story of the Highland Peasant. He died in poverty because his technique was faulty judged by fashionable standards. These are all masters in the art world to-day, because the inspiration was genuine. The true feeling was there.

It is not always necessary, therefore, to ask, what do the critics say of this or that work of art. It may be quite interesting and instructive at the proper time to know what others think, but the first question for each individual is, what feeling does the work arouse in me? Is it the product of true emotion in the heart of the artist and does he make me feel the same emotion?

A next question naturally suggests itself. Has the feeling of the artist compelled the artist to make his composition a unit? This is an important point. The artist can have but one dominant feeling at one time and under its sway all the parts of the body, all the figures in a group, or all the parts of a structure will arrange themselves in harmony and in proper relation to the central idea. In Munkacsy's "Christ Before Pilate," there are many figures; judges, soldiers, officers of the court; the rabble, representing all phases of life in Jerusalem; and, the prisoner. The prisoner stands in the center and you note at once that all interest is focused in him, and the complex group becomes a unit.

This unity will be found in the poem, the oration, the symphony or in any other successful art expression.

The art product is an organic whole like the human body and throbs with the dominant emotional purposes—the life imparted by the artist.

It will be noted also that the real artist, under control of a dominant feeling selects the most fitting words, the most effective color, the truest line. The stronger the feeling the more direct and simple the form of expression. See this illustrated in Lincoln's speech at Gettysburg, in Kipling's Recessional, in French's monument to the young sculptor Milmore; in the Parthenon, and in the "Man With the Hoe."

Under the dominion of genuine feeling the artist fulfills the laws of expression that demand vigor, directness, precision, confidence, authority.

Finally, as the art product is an expression of feeling the successful work will, by all the virtues already recited, and others we have no time to name, impress one as succeeding in its efforts.

Whatever the material employed it must be translucent, the idea or sentiment must shine out. It is said that the people do not enjoy classical music. They would if the master could get his feeling expressed. Usually the technical difficulties of rendition cause a failure on the part of the player to lift the performance above the plane of mechanical skill, and for that reason fail to move the hearts of the people.

Artists themselves, as a rule, have a great delight in the skill displayed in technique. It is the chief part of their profession to teach or practice the technique of art. Schools of expression cannot, of course, impart the feeling that makes the artist; that must come with birth—they can but help the artist to manipulate and control the materials he desires to use to convey his feelings to the hearts of men. Schools of expression tend to emphasize and develop technical perfection, often unintentionally slighting the feeling of inspiration The process is often ruinous to the young artist with an inspiration.

A few simple principles and suggestions make it easy for any intelligent person to achieve at least his own individual liberty in art criticism and appreciation.

Try any work of art in this way and form our own conclusions. They may be crude, but we will see with a clearer and wider vision after a while and will discover values that first escaped us. It is certain that no one can begin to advance in art appreciation and criticism until he gains respect for his own feelings and impressions, and so begins to have emotions of his own. What some one else thinks of a work of art is a part of that other's life and experience. To have any genuine appreciation of my own I must ask in all sincerity and becoming modesty, what do I think of it? How does it appeal to me? When I find an answer in my own heart I will begin to have vital connection with the world of beauty.

Naturally the art products that will appeal to us most directly and powerfully will be the expressions of our own American life, our own experiences finding high artistic expression. We wait for additions to the company of great American artists who will preserve all that is best from the past and make it contribute to a great interpretation of the profoundest emotions and yearnings of our young and great republic, rising under new conditions into a power and dominion hitherto not even seen in the visions of far-seeing prophets, scanning the future from the vantage points of the world. Our greatest artists are waiting until an art-appreciating public calls them into being and creates that atmosphere of admiration and sympathy essential to their vigorous life and best achievements.

Teachers' Examinations.

New York State Uniform Examinations.

AMERICAN HISTORY.

1. (a) What explorations were made in the New World before the year 1500? (b) Give the names of the persons by whom these explorations were made.

2. (a) Who was the most noted Frenchman in America during the early part of the seventeenth century? (b) Name two of his achievements in the New World.

3. State a historical fact connected with the name of each of the following generals: (a) Braddock, (b) Montcalm, (c) Herkimer, (d) Sherman.

4. (a) Why did the colonists resist taxation by the mother country? (b) Name three colonial orators whose speeches did much to cause such resistance.

5. Describe the first capture of Ticonderoga during the revolution.

6. (a) What political parties arose at about the time of the adoption of the constitution? (b) Name two leading men in each of these parties.

7. (a) What addition was made to the territory of the United States during the first twenty-five years of its administrative period? (b) Name three states admitted to the Union during this time. (c) Name two great inventions that were made during the same period.

8. Name a president (excluding Washington) (a) elected with little or no opposition; (b) elected by the house of representatives; (c) declared elected by an electoral commission.

9. What was the decision of the United States supreme court in the Dred Scott case as to (a) the Missouri compromise; (b) the status of Dred Scott; (c) the rights of slave holders in relation to their slaves?

10. (a) Name an important event of President Johnson's administration. (b) State why such event was important.

ANSWERS.

1. (a) Along the New England coast by the Norsemen; (b) in the West Indies and along the coast of South America by Columbus; and along the coast of North America by Cabot.

2. (a) Champlain. (b) He founded Quebec and explored northern New York.

3. (a) His defeat at Fort DuQuesne; (b) The capture of Quebec; (c) The battle of Oriskany; (d) The March to the Sea.

4. Because they believed that taxation without representation was tyranny. (b) Patrick Henry, Samuel Adams, and James Otis.

5. Ethan Allen and the Green Mountain boys surprised the

fort in the morning before the soldiers were awake and took it together with a large amount of military stores.

6. (a) The Federalist and Anti-federalist parties (b) Alexander Hamilton and John Adams were Federalists; Thomas Jefferson and James Madison were Anti-federalists.

7. (a) The Louisiana purchase and the Northwest territory. (b) Kentucky, Louisiana, and Ohio. (c) The cotton gin and the steamboat.

8. (a) James Monroe. (b) Thomas Jefferson. (c) Rutherford B. Hayes.

9. (a) The Missouri compromise had already been repealed by the Kansas-Nebraska bill. (b) That he had no rights as a human being. (c) That slave holders could do with their slaves as with their cattle.

10. (a) The reconstruction of the Southern states. (b) Because it determined the future of the country to a large extent.

ENGLISH COMPOSITION.

1. Show why the infinitives in the following sentences are correctly used:

I should have been happy to meet you.
I am happy to have met you.
I am happy to meet you.

2. Give reasons for the use of each of the punctuation marks in the following: "You must confess, Kenyon, that you never chisled out of marble, nor wrought in clay, a more vivid likeness than this, cunning bust maker, as you think yourself."

3. Correct such of the following sentences as need to be corrected, and give the reasons therefor: (a) Shall you be twenty years old next week? (b) Who do you think she is? (c) He is not as old as he looks. (d) Please, can I be excused?

4. Write a letter of recommendation for one of your pupils who is seeking a position as an errand boy in a large department store, emphasizing such traits as particularly qualify him for the position.

5. Give reasons why the italicized words cannot *always* be used for the words with which they are coupled: (a) *individual*, person; (b) *wages*, salary; (c) *female*, woman; (d) *party*, person.

6. Select an adjective of praise or commendation appropriate to each of the following: (a) Niagara Falls; (b) novel; (c) weather; (d) examinations; (e) grapes.

7. Unite the following statements into a single complex sentence:

My worthy friend put me under the particular care of his butler.

His butler was a prudent man. He was desirous of pleasing me.

He had heard his master speak of me as a particular friend, and that is why he tried to please me.

ANSWERS.

1. The present infinitive in the first and third examples is

properly used because it expresses an act coincident in time with that of the verb upon which it depends; in the second example, the perfect infinitive is used because the act is prior to that of the verb upon which it depends.

2. The quotation marks are used to inclose the exact words of some person. There is nothing in the context to indicate that they are properly used here. The commas are placed before and after *Kenyon* because it is the name of a person addressed. *Cunning bust-maker* is set off by commas for a similar reason.

A period is placed at the end of a sentence. The other commas, used to set off a subordinate part of the sentence are hardly necessary.

3. (a) *Will* you be, etc., because will is the proper word to express futurity in the second person. (c) as he *appears*, a better word than *looks*. (d) *may* I be excused, because *may* expresses permission, while *can* expresses ability.

5. (a) An *individual* may be a person or a thing; (b) a *salary* is a wage for a fixed time, generally paid by the year; *wages* are paid for shorter and more irregular periods; (c) a *female* may be of any order of animals; a *woman* is the female of a human being only. (d) A *party* may be one person or a number of persons.

6. (a) Magnificent; (b) charming; (c) splendid; (d) fair; (e) sweet.

7. My worthy friend put me under the particular care of his butler, a prudent man who was desirous of pleasing me because he had heard his master speak of me as a particular friend.

CIVIL GOVERNMENT.

1. How are the following officers chosen: (a) attorney general of the state of New York; (b) attorney general of the United States?

2. Name one duty of (a) the court of appeals of this state; (b) the state court of claims.

3. (a) What is the chief executive officer of a county called? (b) Who has authority to remove him from office?

4. Name two duties of the secretary of state of the United States.

5. (a) To which department of the national government does the weather bureau belong? Name an important duty of this bureau.

6. State the two executive functions of the United States senate.

7. Give two reasons why the vice-president has less power in legislation than the speaker of the house of representatives.

8. (a) What officers determine the value of the taxable property of each person of the town? (b) How and when are these officers chosen?

9. What officers constitute the town board?

10. Name three duties of the board of supervisors.

ANSWERS.

1. (a) He is elected by popular vote; (b) he is appointed by the president and appointment is confirmed by the senate.

2. (a) To determine points of law on appeals from the supreme court; (b) to hear and determine private claims against the state.

3. (a) The sheriff; (b) the governor.

4. To conduct negotiations with foreign powers; to advise with the president in cabinet meetings on all public matters.

5. (a) Department of Agriculture; (b) to forecast the weather.

6. To punish and expel its members.

7. Because he is not a member of the body over which he presides and does not have the power to appoint committees.

8. (a) Assessors; (b) by the electors at the town meeting.

9. The supervisor, town clerk, and justices.

10. To have charge of county property; audit accounts against the county; levy taxes.

GEOGRAPHY.

1. (a) Which is the shorter and by how much, the equatorial or the polar diameter of the earth? (b) Why cannot this be accurately represented on artificial globes?

2. (a) What is a glacier? (b) Name three glacier fields. (c) What is the origin of icebergs?

3. Name and give the location of (a) six large seaport cities on the Atlantic coast of North America; (b) three on the gulf coast; (c) three on the Pacific.

4. (a) What river drains much of the northwestern part of the United States? (b) For what industry is it noted?

5. Give the location of the volcanic belt in (a) the eastern continent; (b) the western.

6. Thru what countries of South America does the meridian of Washington pass?

7. Name three important products of South American (a) forests; (b) fields and farms; (c) mines.

8. (a) What parallel forms a portion of the northern boundary of this state? (b) What is the longitude of New York city?

9. Name three cities of this state whose location may be accounted for from physical conditions and state such conditions in each case.

10. Name (a) the races of mankind; (b) a people belonging to each race.

ANSWERS.

1. (a) The polar diameter is 26 miles shorter. (b) Because of the relative smallness of even the largest globes.

2. (a) A river of ice. (b) In the Alps, in Alaska. (c) The ice of glaciers breaks off in huge masses as it reaches the sea.

3. (a) Halifax, in Nova Scotia; Boston, in Massachusetts; New York, in New York; Baltimore, in Maryland; Charleston, in South Carolina; Savannah, in Georgia. (b) Mobile, in Alabama; Galveston, in Texas; New Orleans, in Louisiana. (c) San Francisco, in California; Seattle, in Washington; Victoria, in British Columbia.

4. (a) Columbia; (b) for salmon fishing.

5. (a) Along the eastern coast; (b) in the southern and western parts.
6. Colombia, Equador, and Peru.
7. (a) Lumber, india rubber, plumage; (b) cattle, grain, coffee; (c) gold, silver, diamonds, copper.
8. (a) 45 degrees; (b) 74 degrees W.
9. New York, fine harbor and river communication; Cohoes, water power; Buffalo, on Lake Erie, at the terminus of lake traffic.
10. (a) Caucasian, Mongolian, Ethiopian, Malay, Indian. (b) English, Chinese, Negro, Hawaiian, Indian.

HISTORY OF EDUCATION.

1. What was the dominating idea in Persian education?
2. What was the character of the Jewish home?
3. What was Plato's idea in regard to the relation of (a) the child to the state; (b) intellectual to physical education?
4. What were the chief purposes of education in Rome during the early centuries of its history?
5. What condition in English education can be traced to the influence of Alfred the Great?
6. Name one university organized early in each of the following countries: England, Germany, France, Italy.
7. What were the requirements of the "Saxony Plan" of Melanchthon as to (a) number of studies pursued; (b) language used; (c) gradation of pupils?
8. In what century, where, and by whom was the first normal school established?
8. What did St. Augustine hold regarding (a) pagan literature; (b) the chief subject to be taught in school?
10. What was the character of the education of women during the feudal ages?

ANSWERS.

1. To conserve the state; to prepare for war.
2. The purest of antiquity, religious, devoted to the training of the children.
3. (a) The child belonged to the state and his training was under government control. (b) They should be harmoniously united.
4. To develop soldiers and men of affairs.
5. The limitation of education to the higher classes.
6. Oxford, Heidelberg, Paris, Salerno.
7. (a) The studies should be limited in number; (b) Latin; (c) three grades.
8. In the 17th, in Rheims, by LaSalle.
9. (a) They should be excluded from the schools; (b) history.
10. Domestic, including manners, music, and poetry.

PHYSIOLOGY AND HYGIENE.

1. (a) What purpose do starch foods serve in the body? (b) Name five articles of food that contain much starch.

2. Name (a) the three principal bones of the arm; (b) the corresponding bones of the leg.
3. Name three general uses of voluntary muscles.
4. What changes take place in the air in passing thru the lungs?
5. (a) What organs located in the skin help to purify the blood? (b) What other function do they perform?
6. Give the location of (a) the liver, (b) the pancreas. (c) What digestive fluid does each secrete?
7. How is the action of the heart affected by (a) temperature; (b) exercise?
8. Describe the structure of a tooth.
9. What is the physical effect on the brain of the excessive use of alcohol?
10. Name the organs of respiration.

ANSWERS.

1. (a) They produce heat and force. (b) Bread, potatoes, rice, corn meal, buckwheat.
2. (a) The ulna, radius, and humerus. (b) The tibia, fibula, and femur.
3. To enclose the cavities of the body, produce motion, and protect the various organs of the body.
4. It gives up oxygen and takes up carbon dioxide.
5. (a) The perspiratory glands. (b) They regulate the temperature of the body.
6. (a) Above and to the right of the stomach; (b) behind the stomach; (c) the liver secretes the bile and the pancreas the pancreatic juice.
7. (a) It increases as the temperature rises; (b) it is increased.
8. In the interior of a tooth is a cavity filled with pulp which contains the nerves and blood vessels. The pulp is surrounded by a substance called dentine. Outside the dentine is the enamel covering the exposed part of the tooth and the cement covering the roots.
9. It hardens and shrivels the substance of it by absorbing the water.
10. The nose, pharynx, larynx, trachea, bronchial tubes, lungs.

READING.

> Labor is life!—'tis the still water faileth;
> Idleness ever despaireth, bewaileth;
> Keep the watch wound, for the dark rust assaileth
> Flowers droop and die in the stillness of noon.
> Labor is glory!—the flying cloud lightens;
> Only the waving wing changes and brightens;
> Idle hearts only the dark future frightens:
> Play the sweet keys, wouldst thou keep them in tune.
>
> —*Frances S. Osgood.*

1. What is the teaching of the above paragraph?
2. What inflection usually follows (a) direct questions; (b) answers direct *questions? (c)* Give an illustration of each *properly marked.*

History of Our Times.

In nearly all the states a knowledge of current events is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort. The articles are brief and all useless matter is omitted. If in reading the paper you frequently refer to the Cumulative Index, especially when any topic is referred to more than once, you will be surprised at the wealth of knowledge the little paper contains.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

Questions on Current History.

(See *Our Times* (extra) for August 15.)

Give the main facts in the dispute over the Alaska boundary.

How will the United States acquire a new colony on the isthmus by the building of the canal, and what will be the effect?

For what purposes will Pan-American congresses be held this fall?

What important negotiations lately took place in Rome affecting the Philippine islands?

What reasons did the bituminous coal miners give for not striking?

In what ways has our immigration been undesirable of late?

What steps will be taken in the introduction of self-government in South Africa?

Explain the cause of the late disturbances in France.

What agreement have Great Britain and Japan made with Corea?

Describe a remarkable journey that was lately made from Paris to New York.

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to form an adequate and just estimate of each individual pupil's characteristics and educational needs?"

Great Pictures of the World's Great Artists.

EDUCATIONAL FOUNDATIONS considers itself especially fortunate to be able to announce that State Supt. W. W. Stetson, of Maine, will present in its pages suggestions for the study of the great master paintings of the world. There is no one who can make this study more interesting and fruitful to teachers. He has given many years of thought to the subject and is a most skillful teacher of teachers. With him as leader of the course the readers of EDUCATIONAL FOUNDATIONS are assured a helpful series. It is hoped that the first article may appear in the November number, if not before. Half-tone reproductions of art works will illustrate the text, printed in fine paper.

Foundation Questions.

The questions used in the various teachers' examinations, conducted under the auspices of the New York State Department of Public Instruction, will be pub-

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Educational Foundations

Ossian H. Lang, Editor.

Vol. XIV. OCTOBER, 1902. No. 2

Supt. Gilbert's opening article of the series on School Administration outlines a number of the problems to be studied and discussed in the present volume of Educational Foundations. Its intensely practical character will be all the more appreciated since the topics have never before been so satisfactorily treated. The study of social and individual relationships at school and in the school system is of highest importance, and more depends upon the proper understanding of them than upon almost anything else.

Dr. Harris's paper on "Moral Education in the Common Schools" deals with fundamentals, and will yield an abundance of ideas for reflection and elaboration. It gives a comprehensive view of the moral obligations which education must impress upon the young, and indicates the opportunities and limitations of the common school in this department of educational endeavor. The questions at the end of the paper will supply texts for discussion and review.

The article headed "Pestalozzi's Plan of Child Study" is one of a most suggestive and helpful series interesting both to students of children and of the history of education. The plan followed by Basedow in his philanthropy at Dessau, and other historical institutions, which owed their origin and character to the influence of that great German school reformer, will be presented next month.

State Supt. W. W. Stetson, of Maine, will not be able, after all, to furnish for the present volume the series of articles announced in the previous number.

His health and strength failed him, and his physician advised him to reduce his labors and responsibilities to a minimum. It is sincerely hoped that his old-time vigor will be restored, and that EDUCATIONAL FOUNDATIONS may have his contributions at some later time.

The editor considers himself very fortunate to have found one who by training, position, location, and experience is eminently well fitted to take charge of the department of art study, beginning in either November or December. Mr. George Sawyer Kellogg has been for some time the director of the educational museum of the Teachers College, Columbia university, and there is probably no man in America who has so extensive a knowledge of the various reproductions of famous pictures available for study by teachers and pupils. He has for several years conducted parties of teachers and art lovers thru the Metropolitan Museum of Art in New York city, and has interested many in the closer study of the great treasures of that institution. His series of articles ought to prove most welcome.

In the department of "History of American Education" no attempt is made to give a connected and systematized course of readings. We are not far enough along in historical investigations to treat the subject in a satisfactorily comprehensive way. The important problem of the present is to collect the most significant materials for the construction of an historical review. It is by these considerations that the department will be governed. In this way the readers will obtain much important information, which at a later period may find its place in an organized course. The beginnings of the common school, and the development of the professional training of teachers will receive particular attention, and here it is that the least satisfactory work has been done thus far. Readers who have made special studies along the lines here suggested are invited to cooperate.

School Administration.

By Supt. C. B. Gilbert, Rochester, N. Y.

THE literature of the psychological and philosophical phases of education is vast and reasonably sufficient, that of the practical aspects is meager and unsatisfactory.

The aim of the following series of articles is to discuss a few of the practical problems of school administration with the hope that further discussion by other abler writers engaged in school work may be stimulated.

These practical problems are many, difficult, and apparently far from solution. Our philosophies of education and our practices are sadly out of harmony. We have yet to find the point of contact between them.

The problems of education are both psychological and sociological. If it were possible to consider separately the two classes and weigh them, it would undoubtedly appear that the latter is the more important, but stress has been laid chiefly on the psychological.

Dr. Arnold Tompkins in his admirable treatise on the Philosophy of Teaching states that a school primarily consists of a self educating pupil. If education is purely a psychical process, this is true ; if it is largely a social process, the statement is only partially true. Indeed, the single pupil is not a school at all.

If we view education in its entirety, the first article in our creed must be, "We believe that the function of the school is to train youth into social efficiency." Hence it follows inevitably that the training must be social ; the school must be a social institution, and the chief practical problems of school administration are social problems. They deal with people in relation to one another.

Of course in all discussion of educational questions the individual child must be the center, yet considered not chiefly as a psychical unit, but rather as a part of a larger social unity.

It is true that you cannot in theory draw a sharp distinction between psychology and sociology as the basis for teaching. A child cannot receive the best psychical training without a recognition of his social needs. The highest type of individual is developed not in isolation, but in society. Rasselas, solitary with his solitary teacher represents a very poor school indeed.

Nor can you train a child for society without considering his psychical needs. Indeed these needs constitute the necessary groundwork of all teaching, and the only true criterion of a school is the extent to which it satisfies them. But these needs involve fitness to mingle with others effectively.

Hence the practical problems which we are to discuss in these pages are mainly sociological problems. Within the limit prescribed it will be possible to discuss but a few, selected from the countless number facing every one who is concerned with the administration of school affairs and these will mainly be taken from the field of the elementary school. They include questions arising in the single school with its one teacher and one class and those arising in the school system, whether that system be housed under one roof and directed by a principal, or include the many houses and many schools of a great city or a state and be governed by many officials with an extensive and elaborate machinery.

In the former class arise problems simpler in statement but fundamental in character. Here the children are trained. Here the real work of school education is carried on. The problems arising in the system of schools are many and large. But they all have one common factor, the school, and their solution must always include the answer to one question, viz.: how can the system be made to aid the teacher in her work in the individual school? For here is the root of the matter. In the individual school each child is to be trained to serviceable life in society, and the excellence of a system, large or small is measured, not by the impressiveness of its mechanism nor the brilliancy of the educational theories exploited, but by the degree of its efficiency in furthering the work of the single teacher with the single class.

The first questions to consider then are those which concern the individual school. Some of them are these: What should be the personal relations between teacher and pupils and how are they to be secured? What attitude toward the work and the children should the teacher professionally assume? What kind and degree of liberty should be conceded to the pupils? How can their aims and endeavors for the character of the school be brought into harmony with those of the teacher? To what degree and in what way may the school be made a democratic institution?

How may intelligent self-direction for altruistic ends be cultivated in the children? What should be the relations of the children to one another and how shall these be brought about?

How may the highest degree of intellectual vigor be secured in the pupils and how shall it be employed so as best to equip them for successful living?

How shall the teacher reconcile the claims of the individual children, in particular the exceptional ones, with the demands of the school as a whole?

These and many more questions are involved in the one great and elemental question, how may the school be so organized and administered as to best attain its true purpose, that of educating children into social efficiency?

But the smallest single school in the smallest and most remote rural school-house has other problems to meet than these. Altho it is in itself a social whole, it is yet a part of a larger society with which it has many points of contact and to which it is accountable. Indeed it is to these relations that its very existence is due. Hence in its administration they must be considered. The school is after all but a small part of that life which is education, and it is only as it performs its functions in proper relation to the influences making the larger part, that it is most efficient.

So it becomes necessary to consider the relations of the teacher and the school to the homes from which the children come, and this necessity frequently raises questions both delicate and difficult. What are the respective limits of authority of the home and the school? How may both be brought to recognize their own limitations? How may the best in the home be made to strengthen the school, and how may the school stimulate and aid the higher life of the home?

Further, we are coming to recognize the fact that the school with its equipment has social functions of a high order in the general community life. These too must be taken account of in the administration of the school. How may the school be made to stimulate the intellectual and moral activities of the community? What use should be made of its building, its library, and other equipment for higher social purposes?

These are some of the practical questions arising in connection with the administration of the individual school.

When we advance from the single school to the school system we find the problems increasing rapidly in number and complexity. The teacher then becomes one of many. His functions become specialized. He must do certain things in harmony with others, and we are brought to the consideration of such questions as the relations of the teachers to one another, both those who are doing the work of the same grade and those working in other grades; the relations between teachers and the various supervising officers; the relations of these officials to one another; the relations of all to the people's representatives in authority over them, as school boards, school committees, and the like. How may the necessary machinery of a system accomplish its purpose and yet not hinder the work of the individual teacher with the individual children but rather reinforce it? What relations should local systems bear to state and national systems? What relations should school organization bear to the general government, local, state, and national?

With the development of school systems in large communities too, come increasingly difficult problems concerning the relations of the schools to the community life. How may bureaucracy be avoided and the schools remain in close touch with the people, responsive to their felt needs? How may the extensive and expansive plants of the school systems be used to stimulate the higher community life?

These are some of the questions of practical school administration which need careful consideration and more abundant discussion than they have received. As stated at the outset, in the following papers of this series I shall endeavor to state more fully some of them, not to settle them, with the hope that others may follow with the results of their experience.

QUESTIONS.

1. Discuss Dr. Tompkins' statement to the effect that a school consists primarily of self-educating pupils.

2. What is meant by "training into social efficiency"?

3. Why are the chief practical problems of school administration social problems? Illustrate by examples.

4. What is necessary to the development of the highest type of individual?

5. What is the only true criterion of the value of a school?

6. What is the true test of the efficiency of a system of schools?

7. What educational relationships are involved in a single school?

8. What problems arise out of the social relationship of a school to the community in which it is located and by which it is supported?

9. Superintendent Gilbert writes, "We are coming to recognize the fact that the school with its equipment has social functions of a high order in the general community life." To what movement does he refer? Describe and explain its aims.

10. Give a summary of the chief problems involved in school administration.

Moral Education in the Common Schools.

By William T. Harris, Washington, D. C.

THE separation of church and state is an acknowledged principle in our national government, and its interpretation from generation to generation eliminates, with more and more of strictness, whatever ceremonies and observances of a religious character still remain attached to secular customs and usages. Inasmuch as religion, in its definition of what is to be regarded as divine, at the same time furnishes the ultimate and supreme ground of all obligation, it stands in the closest of relations to morality, which we may define as the system of duties or obligations that govern the relation of man to himself as individual and as race or social whole.

To the thinking observer nothing can be more obvious than the fact that the institutions of society are created and sustained by the moral activity of man. The moral training of the young is essential to the preservation of civilization. The so called fabric of society is woven out of moral distinctions and observances. The net-work of habits and usages, which make social combination possible, which enables men to live together as a community, constitutes an ethical system. In that ethical system only is spiritual life possible. Without such a system even the lowest stage of society—that of the mere savage—could not exist. In proportion to the completeness of development of its ethical system a community rises from barbarism.

It is quite clear that so deep a change in the principle of human government as the separation of church and state involves the most important consequences to the ethical life of our people.

All thoughtful people look with solicitude on the institutions of an educational character in order to discover what means, if any there be, can remain for moral education after its ecclesiastical foundation has been removed.

It happens quite naturally that the best people in the community struggle to retain the ecclesiastical forms and ceremonies in the secular. They find themselves unable to discriminate between the provinces of morality and religion. With them education in morality means education in performing religious rites. This view certainly does not harmonize with the political conviction of our people. From year to year we see the religious rites and ceremonies set aside in the legislature, the town meeting, the public assembly, the school. If retained, they become empty forms, with no appreciable effect.

In this sad state of affairs it becomes important to consider all other means of cultivating the ethical sense, and especially to discover how it is that institutions may be emancipated from the direct control of the church.

Without entering into this question in its details at the present time we may remark that the history of Christian civilization shows us a continuous spectacle of the development of institutions into independence. It is a sort of training or nurture of institutions by the church into a degree of maturity in which they come to be able to live and thrive without the support of mere ecclesiastical authority.

But an institution attains its majority only when it has become thorely grounded on some fundamental divine principle. The state, for instance, is organized on the principle of justice—the return of each man's deed to himself. On such principles the state may be conducted without fear of collision with the church or other institutions.

The school, too, has certain divine principles which it has borrowed from the church thru long centuries of tutelage, and, perhaps, can be conducted by itself without church authority and yet be a positive auxiliary to the church and the cause of religion. Let us study these characteristics.

The Teaching of Divine Truth at School.

The school proposes at first this object—to teach the pupil a knowledge of man and nature; in short, to initiate him into the realm of *truth*.

Certainly truth is divine, and religion, itself, is chiefly busied without discovering and interpreting the Divine First Principle of the universe and his personal relation to men. In so far, therefore, as truth—real truth is harmony with the Personality of God, and not spurious truth—is taught in the school it is a positive auxiliary to the church and to religion.

Moral Effect of School Discipline.

But the intellectual pursuit of truth in the school is conditioned upon a deeper principle. Order is the first law, even of Heaven. The government of human beings in a community is a training for them in the forms of social life. The school must strictly enforce a code of laws. The so-called discipline of the school is its primordial condition, and is itself a training in habits essential to life in a social whole, and hence, is itself moral training. Let us study the relation of school discipline to the development of moral character, and compare its code of duties with the ethical code as a whole.

Moral Duties which Ought to be Taught.

First, let us take an ideal survey of the whole field and see what is desirable before we examine the results of the school as actually furnished. One may distinguish moral duties or habits, which ought to be taught to youth, into three classes: (a) Mechanical virtues, in which the youth exercises a minimum of moral choice and obeys an external rule prescribed for him. In this, the lowest species of moral discipline, the youth learns self-denial and self-control, and not much besides. (b) Social duties, those which govern the relation of man to man and which are the properly called "Moral" duties. In this form of moral discipline the youth learns to obey principle rather than the immediate will of another, or a mechanical prescription. (c) Religious duties, or those based on the relation to God as revealed in religion. In these the youth learns the ultimate grounds of obligation, and gains both a practical principle for the conduct of life and a theoretic principle on which to base his view of the world. In his religious doctrine man formulates his theory of the origin and destiny of nature and the human race, and, at the same time, defines his eternal vocation, his fundamental duties. The mere statement of this obvious fact is sufficient to indicate the rank and importance of the religious part of the moral duties.

Turning now to the school, let us take an inventory of its means and appliances for moral education in the line of these several divisions. Let us remember, too, that morality consists in practice rather than in theory, and that the school can teach morality only when it trains the will into ethical habits, and not when it stops short with inculcating a correct theoretical view of right and wrong, useful as such view may be.

Discipline of Obedience.

In the school we note first the moral effect of the requirement of implicit obedience—a requirement necessary within the school for its successful administration. The discipline in obedience in its strict form, such as it is found in the school-room, has four other applications which remain valid under all conditions of society: (a) obedience towards parents; (b) towards employers, overseers, and supervisors, as regards the details of work; (c) towards the government in its legally constituted authority, civil or military; (d) towards the divine will, however revealed.

In each of these four forms there is and always remains a sphere of greater or less extent within which implicit obedience is one's duty. In the first three named this duty is not absolute, but limited—the sphere continually growing narrower with the growth of the individual in wisdom and self-directive power. In the fourth form of obedience to the divine will the individual comes more and more to a personal insight into the necessity of the divine law as revealed in Scripture, in nature, and especially in human life; and he becomes, thru this, emancipated relatively from the direct personal control of men, even of the wisest and best, and becomes rather a law unto himself. He outgrows mere mechanical obedience and arrives at a truly moral will in which the law is written on the heart.

Obedience as a habit to what is prescribed by an authority is obviously a training that fits one for religion, even if religion has no direct part in such training. Hence the school, even when perfectly secular, in securing implicit obedience, is in so far an auxiliary of the church.

Discipline of Order.

The pillars on which school education rest are behavior and scholarship. Deportment or behavior comes first as the *sine qua non*. The first requisite of the school is order; each pupil must be taught to conform his behavior to the general standard, and repress all that interferes with the function of the school. In the outset, therefore, a whole family of virtues are taught the pupil, and taught him so thoroly that they become fixed in his character. In the mechanical duties, habit is everything and theory little or nothing. The pupil is taught—

Punctuality, Regularity, and Silence.

(*a*) *Punctuality.*—He must be at school in time. Sleep, business, play, indisposition—all must give way to the duty of obedience to this external requirement—to observe the particular moment of time and conform to it. Punctuality does not end with getting to school, but while in school it is of equal importance. Combination cannot be achieved without it. The pupil must have his lessons ready at the appointed time, must rise from his seat at the tap of the bell, move to line, return; in short, he must go thru all the evolutions with this observance of rhythm.

(*b*) *Regularity is the Next Discipline.*—Regularity is punctuality reduced to a system; conformity to the requirements of time in a particular instance is punctuality; made general it becomes regularity. Combination in school rests on these two virtues. They are the most elementary of the moral code—its alphabet, in short.

This age is often called the age of productive industry—the era of emancipation of man from the drudgery of slavery to his natural wants of food, clothing, and shelter. This emancipation is effected by machinery. Machinery has quadrupled the efficiency of human industry within the past half-century. There is one general training especially needed to prepare the generations of men who are to act as directors of machinery and managers of the business that depend upon it. This training is in the habits of punctuality and regularity.

Only by obedience to these abstract, external laws of time and place may we achieve a social combination complete enough to free us from thraldom to our physical wants and necessities.

(*c*) *Silence is the Third of these Semi-Mechanical Duties.*—It is the basis for the culture of internality or reflection—the soil in which thought grows.

The pupil is therefore taught habits of silence—to restrain his natural animal impulse to prate and chatter. All ascent above his animal nature arises thru this ability to hold back the mind from utterance of the immediate impulse. The first impression must be corrected by the second. Combination and generalization are required to reach deep and wide truths, and these depend upon this habit of silence.

This silence in the school-room has a two-fold significance: it is necessary in order that there may be no distraction of the attention of others from their work; secondly, it is a direct discipline in the art of combining the diffused and feeble efforts of the pupil himself.

These mechanical duties constitute an elementary training in morals without which it is exceedingly difficult to build any superstructure of moral character whatever. Moral education therefore must begin in merely mechanical obedience and develop gradually out of this stage towards that of individual responsibility.

The Higher Moral Duties.

The higher order of moral duties falls into two classes—those that relate to the individual himself, and those that relate to his fellows :

Duties to Self.

(*a*) *Duties to Self.*—These are, (1) physical, and concern cleanliness, neatness in person and clothing, temperance, and moderation in the gratification of the animal appetites and passions. The school can and does teach cleanliness and neatness, but it has less power over the pupil in regard to temperance. It can teach him self-control and self-sacrifice in the three disciplines already named—punctuality, regularity, and silence—and in so far it may free him from thraldom to the body in other respects. It can and does labor efficiently against obscenity and profanity in language.

(2) Self culture. This duty belongs especially to the school. All of its lessons contribute to the pupil's self-culture. By its discipline it gives him control over himself and ability to combine with his fellow-men ; by its instruction it gives him knowledge of the world of nature and man. This duty corresponds nearly to the one named Prudence in ancient ethical systems. The Christian Fathers discuss four cardinal virtues—temperance, prudence, fortitude, and justice. Prudence places the individual above and beyond his present moment, as it were, letting him stand over himself, watching and directing himself. Man is a two-fold being, having a particular, special self, and a general nature, his ideal self, the possibility of perfection. Self-culture stands for the theoretical or intellectual side of this cardinal virtue of prudence, while industry is its practical side.

(3) Industry. This virtue means devotion to one's

calling or business. Each one owes it to himself to have some business and to be industrious. The good school does not tolerate idleness. It has the most efficient means of securing industry from its pupils. Each one has a definite task scrupulously adjusted to his capacity, and he will be held responsible for its performance.

Is there any better training yet devised to educate youth into industry, and its concomitants of sincerity, earnestness, simplicity, perseverance, patience, faithfulness, and reliability, than the school method of requiring work in definite amounts and at definite times and of an approved quality?

The pupil has provided for him a business or vocation. By industry and self-sacrifice the pupil is initiated into a third of the cardinal virtues—fortitude.

Duties to Others.

(b) *Duties to Others.*—Duties to self rest on the consciousness of a higher nature in the individual and of the duty of bringing out and realizing this higher nature. Duties to others recognize this higher ideal nature as something general, and hence as also the true inward self of our fellowmen. This ideal of man we are conscious that we realize only very imperfectly, and yet it is the fact that we have the possibility of realizing a higher ideal in ourselves that gives us our value above animals and plants. In our fellowmen we see revelations of this ideal nature that we have not yet realized ourselves. Each one possesses some special gift or quality that helps us to know ourselves. The experience of each man is a contribution towards our own self-knowledge, and vicariously aids us without our being obliged to pay for it in the pain and suffering that the original experience cost. Inasmuch as our ideal can be realized only thru this aid from our fellowmen, the virtues that enable us to combine with others and form institutions precede in importance the mechanical virtues.

There are three classes of duties towards others:

(1) Courtesy,—including all forms of politeness, good breeding, urbanity, decorum, modesty, respect for public opinion, liberality, magnanimity, etc., etc., described under various names by Aristotle and others after him. The essence of this virtue consists in the resolution to see in others only the ideal of humanity, and to ignore any and all defects that may be apparent.

Courtesy in many of its forms is readily taught in school. Its teaching is often narrowed by the manner of the teacher, which may be sour and surly, or petulant and fault-finding. The importance of this virtue both to its possessor and to all his fellows demands a more careful attention on the part of school managers to secure its presence in the school-room.

(2) Justice : this is recognized as the chief in the family of secular virtues. It has several forms or species. as, for example, (a) honesty, the fair dealing with others, respect for their rights of person and property and reputation ; (b) truth-telling or honesty in speech—honesty itself being truth-acting. Such names as integrity, uprightness, righteousness, express further distinctions that belong to this staunch virtue.

Justice, like courtesy, in the fact that it looks upon the ideal of the individual, is unlike courtesy in the fact that it looks upon the deed of the individual in a very strict and business-like way, and measures its defects by the high standard of the ideal. According to the principle of justice, each one receives in proportion to his deeds and not in proportion to his possibilities, wishes, or unrealized aspirations. All individuals are ideally equal in the essence of their humanity ; but justice will return upon each the equivalent of his deed only. If it be a crime, justice returns it upon the doer as a limitation of his personal freedom or property. The school is perhaps more effective in teaching the forms of justice than in teaching those of courtesy. Truth-telling, especially, receives the full emphasis of all the power of school discipline. Every lesson is an exercise in digging out and closely defining the truth—in extending the realm of clearness and certainty further into the region of ignorance and guess work. How careful the pupil is compelled to be with his statements in the recitation and with his previous preparation!

Justice, in discovering the exact performance of each pupil and giving him recognition for it, may give place to injustice in case of carelessness on the part of the teacher. Such carelessness may suffer the weeds of lying and deceit to grow up, and it may allow the dishonest pupil to gather the fruits of honesty and truth, and thus it may offer a premium for fraud. The school may thus furnish an immoral education, notwithstanding its great opportunities to inculcate this noble virtue of honesty. The private individual must not be permitted to return the evil deed upon the doer, for that would be revenge, and hence a new crime. All personality and self-interest must be sifted out before justice can be done the criminal. Hence we have another virtue—that of respect for law.

(3) Respect for law, as the only means of protecting the innocent and punishing the guilty, is the complement of justice. It looks upon the ideal as realized not in an individual man, but in an institution represented in the person of an executive officer, who is supported with legislative and judicial powers.

The school when governed by an arbitrary and tyrannical teacher is a fearfully demoralizing influence in a community. The law-abiding virtue is weakened and the whole troop of lesser virtues take their flight and give admittance to passions and appetites. But the teacher may teach respect for law very thoroly, on the other hand. In this matter a great change has been wrought in the methods of discipline in later years. Corporal punishment has been very largely discussed. It is clear that with frequent and severe corporal punishment it is next to impossible to retain genuine respect for law. Only the very rare teacher can succeed in this. Punishment thru the *sense of honor* has therefore super*seded for the most part in* our best schools the use of the rod. It is easy now to find the school admirably disciplined and its pupils enthusiastic and law-abiding—governed entirely without the use of corporal punishment. The school possesses very great advantages over the family in the matter of teaching respect for law. The parent is too near the child, too personal, to teach him this lesson.

Religious Duties.

(c) *Religious Duties.*—At this point we approach the province of religious duties. Higher than the properly moral duties, or, at least, higher than the secular or cardinal virtues, are certain ones which are called "celestial" virtues by the theologians. These are faith, hope, charity, and their special modifications. The question may arise whether any instruction in these duties can be given which is not at the same time sectarian? An affirmative answer will have to show only that the essential scope of these virtues has a secular meaning and that the secular meaning is more fundamental than in the case of the so-called cardinal virtues.

(1) Faith in a theologic sense means the true knowledge of the first principle of the universe. Everybody presupposes some theory or view of the world, its origin and destiny in all his practical and theoretical dealing with it. Christendom assumes a personal creator of divine-human nature who admits man to grace in such a way that he is not destroyed by the results of his essential imperfection, but is redeemed in some special manner. The Buddhist and Brahmin think that finitude and imperfection are utterly incompatible with the divine being, and hence, that the things of the world cannot be permitted to have real existence. They exist only in our fancy. Here is no grace, no redemption. Nature is not a real existence to such a theory, and hence there can be no natural science. In Christian countries the prevailing institutions and confessions of faith recognize this belief in a divine-human God of Grace, and their *people* more or less cultivate science. Some persons *theoretically* deny this belief, but cling to science, which

is itself based on the deep-lying assumption that the world is a manifestation of reason. Such skeptics have not yet measured the consequences of their theories, and for our purposes may be said to belong to the faith, inasmuch as the reality of a finite would presuppose a personal God, whose essential attribute is grace. The agnostic, too, is strenuous in acknowledging the practical importance of the code of moral duties.

The prevailing view of the world in Christian countries is very properly called faith, inasmuch as it is not a view pieced together from the experience of the senses, nor a product of individual imperfection unaided by the deep intuitions of the spiritual seers of the race.

Faith is a secular virtue as well as a theological virtue, and whoever teaches another view of the world—that is to say, he who teaches that man is not immortal, and that nature does not reveal the divine reason—teaches a doctrine subversive of faith in this peculiar sense, and also subversive of man's life in all that makes it worth living.

(2) Hope, the second theological virtue, is the practical side of faith. Faith is not properly the belief in some theory of the world, but in the peculiar theory of the world that Christianity teaches. So hope is not a mere anticipation of some future event, but the firm expectation that the destiny of the world is in accordance with the scheme of faith, no matter how much any present appearances may be against it. Thus the individual acts upon this conviction. It is the basis of the highest practical doing in this world. A teacher may show faith and hope in the views of the world which he expresses, and in his dealings with his school, in his teaching of history, in his comments on the reading-lesson, in his treatment of the aspirations of his pupils. Altho none of these things may be consciously traced to their source by the pupils, yet their instinct will discover the genuine faith and hope. Nothing is so difficult to conceal as one's conviction in regard to the origin and destiny of the *world and of man.*

(3) Finally, charity is the highest of these virtues, in the sense that it is the concrete embodiment and application of that view of the world which faith and hope establish.

The world is made and governed by divine grace, and that grace will triumph in the world. Hence, says the individual, "Let me be filled with this principle and hold within myself this divine feeling of grace towards all fellow-creatures." Charity is, therefore, not almsgiving, but a devotion to others. "Sell all thou hast . . . and follow me." Faith perceives the principle; hope believes in it where it is not yet visible; charity sets it up in the soul and lives it. There might be conceived a faith or insight into this principle of divine grace and a hope that should trust it where not seen, and there be in the possessor of the faith and hope a lack of charity. In that case the individual would acknowledge the principle everywhere, but would not admit it into himself. With charity all other virtues are implied—even justice.

While courtesy acts towards men as if they were ideally perfect and had no defects; while justice holds each man responsible for the perfect accordance of his deed with his ideally perfect nature, and makes no allowance for immaturity; charity sees both the ideal perfection and the real imperfection, and does not condemn but offers to help the other, and is willing and glad to sacrifice to assist the imperfect struggle towards perfection.

The highest virtue, charity, has, of all the virtues, the largest family of synonyms: humility, considerateness, heroism, gratitude, friendliness, and various shades of love in the family (parental and filial, fraternal and conjugal), sympathy, pity, benevolence, kindness, toleration, patriotism, generosity, public spirit, philanthropy, beneficence, concord, harmony, peaceableness, tenderness, forgiveness, mercy, grace, long-suffering, etc., etc.

The typical form of this virtue as it may be cultivated in school is known under the name of kindness. A *spirit of true* kindness, as it can be made to pervade a school, becomes the highest fountain of virtue. That such a spirit can exist in a school as an emanation from a teacher we know from many a saintly example that has walked in the path of the great Teacher.

From the definition of this principle it is easy to deduce a verdict against all those systems of rievalry and emulation in school which stimulate ambition blyond the limits of general competition to the point of sefishness. Selfishness is the root of mortal sin, as theologians tell us, and the lowest type of it is cold, unfeeling pride, while envy is the type next to it. Returning to our first question, we repeat:

Dogmatic Instruction in Morals.

In a state which has no established church and in a system of public schools that is not permitted to be under the control of sects or denominations, what shall be the fate of dogmatic instruction in morals—especially instruction in that part of morals which rests upon the celestial virtues? Of course the problem is still a a simple one in parochial schools and denominational schools. But it is not proper for us to ignore the dangers incurred even in strictly parochial schools. The more strict the denominational control, the less likely is there to pervade the school that spirit of tolerance and charity towards others which is the acknowledged deepest tap-root of the virtues. Were the community homogeneous in its confession of faith, religious instruction could still properly remain in school. The movement of American society is not, however, in that direction, and it is quite likely that the church must see formal religious instruction, even to the ceremony of reading the Bible, leave the common schools altogether. But a formal reading of the Bible "without note or comment," or a formal prayer on opening the school, is surely not religious or moral instruction in any such efficient sense as to warrant any Christian man or woman in sitting down in content and claiming a religious hold on the popular education. Such a delusive content is indeed too prevalent. There never was a time when the need was greater for a widespread evangelical movement to begin, and shall make real once more the faith that has well-nigh become a mere formula. A Robert Raikes now, and here, to give new vitality to the Sunday-school movement; a concerted series of movements like that of Dr. Vincent, is needed.

It is not the undoing of the separation of church and state even in the common school, nor the struggle to maintain a frigid and bloodless "non-sectarian," so-called, religion in our schools that is to succeed or do any good. It is for the churches to rouse from danger, and proselyte by new means and appliances as well adapted to the present day as the Sunday-school movement was seventy years ago.

It is for the teachers not to claim the right to introduce formal religious ceremonies, but to make all their teaching glow with a genuine faith and charity, so that pupils will catch from them their view of the world as the only one that satisfies the heart and the intellect and the will.

Let us note the fact that in the mechanical virtues, so important to making good citizens, the training in the schools is already admirable. Human freedom is realized not by the unaided effort of the individual, but by his concerted or combined effort in organized institutions like the State and Civil society. Those mechanical virtues make possible the help of the individual in this combination, and fit him for the modern world, now bent on the conquest of nature.

The social virtues, justice, politeness, and obedience to the law, may be equally well provided for, altho in fact they are not successfully taught in every school.

The celestial virtues can be taught by teachers inspired by those virtues, and by none others. The empty profession of such virtues without the devotion of the life to them is likely in the school, even more than elsewhere, to produce the well-known practical result of atheism.

Main Principles of Moral Education in Common Schools.

In conclusion let us call up the main principles and repeat them in their briefest expression:

1. Moral education is a training in habits, and not an inculcation of mere theoretical views.

2. Mechanical disciplines are indispensable as an elementary basis of moral character.

3. Lax discipline in a school saps the moral character of the pupil. It allows him to work merely as he pleases, and he never can re-enforce his feeble will by regularity, punctuality, and systematic industry. He grows up in habits of whispering and other species of intermeddling with his fellow-pupils, neither doing what is reasonable himself nor allowing others to do it. Never having subdued himself he will never subdue the world of chaos, or any part of it, as his life work, but will have to be subdued by external constraint on the part of his fellowmen.

4. Too strict discipline, on the other hand, undermines moral character by emphasizing too much the mechanical duties, and especially the phase of obedience to authority, and it leaves the pupil in a state of perennial minority. He does not assimilate the law of duty and make it his own. The law is not written on his heart, but is written on his lips only. He fears it but does not love it. The tyrant teacher produces hypocrisy and deceit in his pupils. All manner of fraud germinates in attempts to cover up shortcomings from the eye of the teacher. Even where there is simple, implicit obedience instead of fraud and the like, there is no independence and strength of character developed.

The best help that one can give his fellows is that which enables them to help themselves. The best school is that which makes the pupils able to teach themselves. The best instruction in morality makes the pupil a law unto himself.

Hence strictness, which is indispensable, must be tempered by such devices *as cause* the pupils to love to obey *the law for the law's sake.*

QUESTIONS.

1. How does Dr. Harris define (a) morality? (b) ethics?

2. What is meant by moral education?

3. Why is moral training of the young essential to the conservation of civilization?

4. Why do many serious people find themselves unable to discriminate between morality and religion? Effect of attitude toward common schools?

5. Why does Dr. Harris call the church an institution for the training of institutions? Illustrate.

6. What makes the secular common school a positive auxiliary to the church and the cause of religion?

7. How does the school train pupils for community life? What means employed?

8. Classify the moral duties or habits that ought to be taught at school.

9. Moral effect of enforced obedience in school discipline?

10. What is the first requisite of school discipline? Explain.

11. How does insistence upon compliance with mechanical school duties promote moral training? Give reasons and illustrate by examples.

12. Training in temperance and purity of thought at school? (Means and methods.)

13. What are the "four cardinal virtues"? Their recognition in the training of the common school?

14. What means do you consider the most efficient for securing industry from pupils? Reasons? Examples?

15. How can the school promote self-knowledge and stimulate a desire for constant self-improvement?

16. What mistakes on the part of teachers are most frequently responsible for loss of interest in self-culture? Explain.

17. How may the school cultivate courtesy in pupils? Your own plan?

18. What does training in honesty and justice require of the teacher?

19. Enumerate and characterize pedagogically the mistakes frequently found in schools which place a premium upon fraud and practically constitute a training in immorality. (Treat this fully. Several important considerations touching the daily practices of many teachers are involved.)

20. How does the school train in respect for law? The opposite? (Examples of practical encouragement of lawlessness.)

21. What principles of action are fundamental in school government to ensure training in justice and respect for law?

22. Dr. Harris says, "The school possesses very great advantages over the family in the matter of teaching respect for law." Explain this and give reasons.

23. Can the common school give instruction in "celestial" or religious duties? Qualify your answer by reasons. (If answering in the affirmative, tell why and how.)

24. Why may Faith and Hope be considered secular virtues as well as "celestial" ones? How does the training at school affect their development?

25. What typical form of Charity can and ought to be cultivated at school?

26. What must be the attitude of the common school toward religious instruction? Explain your reasons.

27. Discuss the reading of the Bible in school "without note or comment."

28. What is meant by moral education?

29. What is meant by "lax school discipline"? Its effect?

30. What are the usual results of too strict discipline? Reasons? (Practical examples?)

Give (or write out) a summary of Dr. Harris's views concerning moral education in common schools.

Caution in Child Study.

By M. R. Walker.

(Continued from last month.)

What are Suitable and Sufficient Tests?

(b) The difficulty of finding, and of applying suitable common tests to a number of individual children, in order to obtain general results.

The scientific study of phenomena of any kind implies observation of a number of similar instances. If we want to find out, experimentally, how the minds of children develop, *e. g.*, how their power of right judgment gradually gains strength and width, how their standard of beauty changes and rises, how their moral and religious nature undergoes modification and purification, one obvious method is to frame questions calculated to draw out the children's own ideas upon such matters, and present them, in the form of examinations, to numbers of children of different ages, and afterwards to classify results.

The results obtained by this method are often extremely interesting and useful, both as throwing fresh light on the processes of the development of the immature mind, and also as corroborating what we already know about these processes.

The only possible objection to many of these tests is the difficulty of preventing the children from knowing that they are given to them with a purpose other than that of the usual examination papers, and thus causing them to wonder what we "are after," as Professor Sulley says; and finally, to find out what we "are after."

I am not sure that we students of children always sufficiently realize the fact that children are students of grown-up people. It has, fortunately, not yet occurred to them to organize themselves into a society for "Adult Study;" and even if it did, the difficulties in their way would, fortunately, be insurmountable; but wherever we find a little social group of children and adults, we may be sure that the children are not only the observed, but also the observers.

It would, in any case, be difficult indeed for the children of the present day to remain in ignorance of the fact that we think a very great deal about them, and try to find out a very great deal about them. We cannot keep this from children, any more than we can keep altogether from their knowledge our anxieties regarding their physical organism in health and disease; but it would, I think, be well, if the same caution as is generally recognized to be desirable in the case of physiological and medical literature, were exercised in connection with all this literature which is specially concerned with the mental life of the child.

The children know that we are "after" something; and when, without warning, an examination paper on, *e.g.*, "Dolls," is given to a girls' school *en masse*—when, moreover, the answers to these papers are taken away and never more heard of (unless, indeed, some child happens to read the statistical results in some magazine) —curiosity cannot fail to be excited, even if the children do not at once jump to conclusions as to the real meaning of this examination. As a matter of fact, in one school where a test was given for the first time, and where all possible precautions had been taken, one girl was overheard telling another afterwards that "all the papers were going to be sent to a society."

If, after an interval, the same school should be simultaneously asked to answer the question: "If you had an allowance of twenty-five cents a week, what would you do with it?" I think the surmise would deepen into a certainty that the authorities, for some reason or other, were making experiments on the inner consciousness of the writers, and the result of this would be that the value of the answers would be considerably depreciated.

Questions of the kind just quoted can, however, only be objected to, if my supposition is a correct one, in that they tend to encourage self-consciousness in the children, and thus to deprive their answers of the directness and spontaneity which we require to secure good results. If given occasionally and with proper precautions, *e. g.*, as an exercise in composition which the teachers correct and value, many of the tests proposed could be made to serve two purposes. The necessity, however, for giving them simultaneously to a number of classes, in order to prevent the children talking about them before they write their answers, will always, I fear, lend an appearance of artificiality to the device. There is, moreover, another danger to be reckoned with if the exercise is treated as a composition, and that is, that the pupils, especially the older ones, will be apt to think more of the form than of the matter of their theme, and so, here again, we are in danger of losing the directness and spontaneity which are essential if the test is to be worth anything.

I do not say that these difficulties are insuperable, but I think they are serious, and only to be fully overcome in a school where there are peculiarly sympathetic relations between teacher and taught, and where the children have been so accustomed and so encouraged to express themselves frankly that they may be trusted to be absolutely sincere even in composition.

These are somewhat ideal conditions, but if we can secure them, what an admirable exercise might be made out of the test given in Earl Barnes' *Studies in Education*, p. 47 :—"If you were shipwrecked on an island in the middle of the sea, and you found, in one corner of the island, an old house of logs and part of an old wooden boat, with broken arrows in the bottom of it, what would these things tell you?" The special purpose of this question is to test the power of inference in children of various ages, but if treated first as an exercise in composition, and criticised and discussed in class, it might be made both useful and interesting as an ordinary piece of school work.

Take, again, the test proposed in the same volume, p. 86, where the children are asked to write down two accounts of the Fall of Fort Sumter :—(a) An account taken from a newspaper or history book ; (b) The actual despatch sent to headquarters by Major Anderson after the event.

After writing down these two accounts, the children were asked to answer the questions :—" Which of the two accounts is the better, and why? " " Which of these two accounts would you keep if you could only keep one, and why?

This test is one of a series on the historic sense in children, and very interesting results seem to have been obtained. It would make a school exercise, as it deals with matters of fact, and a discussion on the answers given would furnish an opportunity for cultivating the intelligence.

When, however, an attempt is made to cover the whole ground of a child's mental processes, fresh difficulties appear in connection with such collective tests.

For example, the following test was given to 2,914 school children in America :—" One day, when the teacher was called to the door to speak with a lady, several children in the room made a loud noise. She heard the noise, but when she returned she could not find out who had made it, and so she kept the whole class after school. Was the punishment just or unjust, and why?"

The object of this test was to ascertain something about the mental attitude of children at various ages toward social law and order. Does " honor " require the individual to be silent, and let law-breakers go unpunished? Or does " honor " require him to inform upon them if they will not confess? As regards the general results in this case, I believe it was found that (a) 2,090 children considered the punishment just, and 821 considered it unjust ; (b) children under thirteen were more inclined to consider the punishment just than children above thirteen ; (c) the idea that it is wrong to punish an innocent person, under any circumstances, gains ground as children grow older ; but (d) the idea of personal responsibility for good order in the school-room begins to prevail after thirteen, and constantly increases, while the idea that it is wrong to tell tales gives place to the idea that, in certain circumstances, " honor " requires the truth to be told, even if it incriminates others. This is interesting, as corroborating the assumption derived from general psychological principles that (a) the younger the child is, the readier he is to acquiesce in punishments imposed by those in authority; (b) as the sense of personality grows, the more inclined is he to resent any infringement of his real or supposed rights; (c) as the abstract ideas of right and wrong gain ground, so does the idea of individual responsibility for the good behavior of the community increase in strength.

Is it, however, worth our while, for the sake of gaining this information, or corroboration, to stimulate the critical faculty of hundreds of school children in deciding whether a given teacher acted justly or unjustly on a given occasion in her dealings with her class? I think not. I think, moreover, that a test of this kind is calculated to lead children to suppose that a critical spirit in connection with the daily application of discipline is an attitude of mind expected and authorized by the authorities,—a result which we should all surely deprecate, seeing that the critics, in such a case, have not reached the age and are not in possession of the knowledge which would justify their arrogating to themselves the office of judges.

I have dwelt on this test of the children's sense of justice rather than on the one given to four thousand children in which they were asked to describe: (a) A punishment they had themselves received that they considered just, and why they considered it so, and (b) a punishment they had received which they considered unjust, and why they considered it so; because it does not seem fair in such a discussion to choose instances which are extreme, but I cannot help referring to it, for the sake of the criticism passed on it by a teacher in an American school who declined to give it to her children.

I wish to be excused from asking children to write those punishment papers. Not from personal reasons. I have given no punishment worth noting as severe, but my predecessor did so, I hear. My reasons are :—

(1) It brings up anew old frictions that should be forgotten.

(2) Some of these punishments would not be correctly told even from the child's standpoint, for their ideas are totally colored by their mother's opinion of the matter as she heard it. One of these mothers told me her boy was whipped severely for saying that 2x2=4.

(3) The children are apt to think from this request that it is getting to be conceded that they ought not to be punished unless they want to be.

Substituting "unless they consider they ought to be" (which is, I think, what is meant) for "want to be," I agree most thoroly with the views expressed by this teacher, altho Professor Earl Barnes seems confident that, in a wholesome school atmosphere, such an exercise in the hands of a sensible teacher could be made "a strong and tonic piece of work" for both.

The teacher whose objections I have quoted seems to have only thought of school punishments, but that the question may be viewed by the children in a more intimate aspect is shown by the answer of the boy of twelve who wrote simply, "I don't care to tell family effers."*

Again, the whole question of fear in childhood and youth is an interesting one, and one that calls for careful study on the part of parent and teacher ; but the knowledge will be too dearly bought if it is gained by reading a list such as the following to children even in upper forms or classes, and asking them to write as an exercise in composition an account of their own early or present fears : "Fears of ghosts, spirits, witches, fairies, dragons, or mythological monsters ; dream-fears, conscience-fears as of having committed unpardonable sins ; punishments specially incurred or sent from heaven, loss of soul and next-world fears generally ; fears of sin or impurity."

Or, to take another example from the same syllabus : "Fears of disease and dying, death, loss of friends, position, fortune, beauty, or of health generally; heart disease, cancers, fits, consumption, starvation, fear of prevalent diseases or of those read of."

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* Studies in Education, Vol. I., pp. 110, 149.

Yet this is suggested by Dr. G. Stanley Hall, not merely as a study in reminiscence for adults, but as a test for pupils in the upper school.

Another test, set in connection with the superstitions of childhood, is the following, given to fifty-two boys and girls living in a California orphanage. They were first asked to write answers to the question: "What would you do if you saw a ghost?" This was to test their emotional attitude to spiritual manifestations.

A day or two afterwards they were presented with the following examination paper:—

Do you believe in ghosts?

What do you think they are like?

Where and when did you first hear of ghosts?*

This was intended to test their intellectual attitude towards spiritual manifestations.

Now I think it cannot be gainsaid that however interesting to the student of children the answers of these orphans might be, the effect on the orphans themselves of having the reality of ghosts apparently seriously assumed in the first instance, and then of being asked as seriously if they believed in the existence of ghosts, with all the incidental stimulation of the uncontrolled imagination of childhood, cannot have been good, but must, rather, have been directly harmful.

Another question of much interest is the growth of the power to judge which of two motives to action, each good in itself, is to be selected as the ruling one in given circumstances.

But if this is to be tested by presenting a number of children of different ages with some concrete moral problem, and asking them to solve it, I think we are guilty of laying on them burdens too heavy to be borne.

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* Studies in Education, p. 53.

Scientific Attitude Toward Children.

(c) The danger that the spirit of scientific inquiry, and the search for general truths, may render the child student indifferent to the interests and needs of the individual.

There is, perhaps, some slight danger of this, but I hardly think it is a serious one as regards parents and teachers. As Professor James says, quoting Professor Münsterberg, "the teacher's attitude toward the child, being concrete and ethical, is positively opposed to the psychological observer's, which is abstract and analytic." And if this is true of the teacher, still more is it true of the parent. The scientist may regret half seriously, half humorously with Dr. Louis Robinson[*] that the nursery is still "a close preserve to the poachers and priers of science," and not open, like the bee-hive and ant-hill for the purposes of investigation and experiment; but the natural interest of parents in general, and of properly constituted teachers, will continue to center in the particular children with whom they have to do, and the distinctive characteristics of each individual will always be considered of more importance than the common characteristics of the many.

Still, there is perhaps some danger in the case of the enthusiastic votary of child-study, of allowing the scientific aspect of the movement to take too great a hold upon him or her, and to spend time which might be employed for the direct benefit of the children in "filling syllabuses, inscribing observations, compiling statistics, and computing cent. per cent."

So far, however, as my own experience and observation go, this has not reached any undue extent in our schools, and, as a rule, it is precisely the teachers most keenly alive to the need for individual treatment who are willing to undertake some of this statistical work.

Child-study has suffered somewhat from the tendency of certain people to lay hold of its humorous side, and retail the mirth-provoking remarks and ideas of children; and here perhaps a caution is needed. We do not always treat the subject in a sufficiently reverential way, remembering that the ideas that seem absurd or ludicrous to us are the outcome of mind in the making, and that behind them there invariably lies something which is serious to the child.

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[*] "'Darwinism in the Nursery,' in the *Nineteenth Century* for 1891.

I have not touched on the physiological aspect of child-study, on methods of testing sense-capacity, anthropometric observations, recognition of fatigue signs, and so forth, because, so far as I am able to judge, there is less danger of doing any harm to the children in this department than in the domain of psychology.

Children are quite accustomed to have their physical organism made the subject of observation, and they would generally, I believe, accept such investigations as, *e. g.*, periodic weighing and measuring, as pleasant and amusing interludes. Examinations of this kind might, however, if injudiciously managed, tend to make the children think too much about their bodily health, and it is essential that they should be conducted cheerfully, and with as little fuss as possible. It seems almost impertinent to observe that, during such examinations, no alarming allusions to the health of individuals should be made in their presence. Yet, that the caution is not altogether needless is proved by an incident within my knowledge. A number of children were being tested as to their sight-capacity, amongst other things, and the examiner made a running commentary which, I suppose, he thought the children could not understand; nevertheless, one poor little child went home to her mother with the intelligence that she would shortly become quite blind. Whether this actually happened or not I do not know. The sequel does not in any way affect the moral of the tale. The main point is that the information was given neither in the proper place nor at the proper time. A painful shock was given to the child, and a still more painful shock to the mother.

To conclude, then, what have we, as students of children, to guard against, lest our zeal for the study prove harmful to its objects?

We may, I think, note the following points as essential, whatever methods we employ :—

Summary.

(1) That nothing should be said or done in the presence of the children that would lead them to think unduly about their physical health.

(2) That nothing should be allowed to come in the way of our interest in the individual children for whose upbringing we are, either as parents or teachers, responsible.

(3) That any collective tests employed should be such as can be legitimately and naturally used in the ordinary course of school-work, and should be regarded by the children as ordinary school-work.

(4) And this, I think, is the most important of all, that nothing should be done or said in the presence of the children that would lead them to suppose that we are "studying" them in order to collect information about children in general, or to try to reach their "inner self."

These are, perhaps, counsels of perfection, but the nearer we can attain to them the better will it be for the children in whose interests we, as parents and teachers, are devoting time and thought to "child-study."

QUESTIONS.

1. What suggestion does Locke (1632-1704) give in his "Thoughts on Education" concerning child study?

2. Rousseau considers child study an important art. Discuss.

3. Give a summary of the chief difficulties to be encountered in studying a child.

4. What qualities are essential to the study of children? Why?

5. What are the principal cautions that must be observed in studying a child? Explain.

6. What dangers of scientific child study must teachers guard themselves against?

Pestalozzi's Plan of Child Study.

AT Pestalozzi's school in Yverdon there were assigned to each of the older teachers from twelve to sixteen boys for special observation and study. The teachers were charged to use every effort to learn to know their pupils individually and to discern especially the predominant characteristics of each. In order to accomplish their task the teachers entered into close and intimate association with their pupils. Every week Pestalozzi called a conference of his assistants, which often lasted several hours. Here the observations gathered in the study of individual pupils were presented and discussed. The conclusions reached with reference to the children were then entered in books specially kept for the purpose. The entries in these child-study records formed the basis of the reports to parents.

Value to Teacher and Pupils.

Pestalozzi considered these records of observations of highest importance. "By this means," he writes, "the teacher is enabled to form a proper estimate of each of his pupils and enter into each child's life as a mother lives in the life of her child. At the same time the teacher learns to avoid one-sidedness in the treatment of children and to overcome hasty judgment of the expressions and actions of his pupils. The teacher is neither blinded by an accidental happy thought of a child, nor is he provoked to harshness and rough treatment by a display of weakness or awkwardness. He learns how to distinguish between semblance of strength and true strength, between momentary inclination or evanescent interest and definite tendency and lasting impulse. He can be just and will be just because he discerns the significance of each particular observation with reference to the whole of the pupil's character, gifts, and capacities. He relates everything to the whole character because he is ever conscious of that which the child really is, of the child's individuality as a whole.

Foundations of Educational Judgment.

"The collection of opinions and remarks about the child affords means for an easy and safe comprehension of his moods and progress. It does more. It affords a basis for the comparison of the stages of physical and mental development. The teacher may thus learn at what ages, at what times, and under which circumstances the child seemed to stop growing or to be going backwards, or to be growing and developing. There will be revealed to the teacher the peculiar influence of age and of the body upon the mind, and *vice versa*. He will also know how to judge errors in education, which are due to wrong inferences, with reference to the pupil's individuality. In short, the knowledge the teacher derives from the recorded observations of individual pupils and the discussions in the weekly conferences is of utmost importance and value and supplies him with a good foundation upon which to base educational judgment and the treatment of the child."

Character Sketches of Pupils.

There have been preserved a number of character sketches of pupils in Pestalozzi's school at Neuhoff (1778), which reveal careful child-study. Here are a few of them which may suggest to readers of EDUCATIONAL FOUNDATIONS plans for recording observations:

"6. Henry Vogt, of Mandach, eleven years old, three years in the institution; weaves very nicely; begins to write; is attentive also in French and arithmetic; exact, careful, and orderly in everything, but appears to me to be shrewd, tricky, distrustful, and dissatisfied at heart; he is healthy.

"16. Friedly Mynth, of Bysti; very weak; incapable of severe labor of every kind; splendid talent for drawing, especially good in sketching from nature; full of artist's whims, roguish; drawing is about all the work he does; has been here one year and a half; 10 years old.

"18. Marianne Mynth, his sister, 8 years old; a handsome, capable, sensitive child, but also whimsical and headstrong; excellent talent for singing, but too weak for heavy farm work."

Pestalozzi thus endeavored to sum up in brief, significant statements the observations made in the study of individual pupils. Physical, intellectual, and moral qualities were noted down, and also, wherever possible, the previous and present environment of each pupil.

QUESTIONS.

1. How were the pupils in Pestalozzi's school distributed for purposes of child study by their teachers? Discuss the plan.

2. How were the teachers' conferences in Pestalozzi's school made to contribute to child study?

3. Describe the plan of the records of observations of children followed in P.'s school.

4. What was P.'s purpose in urging a close study of children's individualities?

5. What will be the effect of sympathetic and comprehensive child study upon the teacher?

6. How does child study increase a teacher's power in the management of a school ?

7. How must an individual child's separate traits of character be regarded by the teacher in observing them?

8. Why is it necessary that the teacher should strive to form a complete picture of the individuality of each pupil? How can this be done?

9. Discuss the value of careful records of all significant observations of a child's development, physically and intellectually.

10. Describe and illustrate Pestalozzi's plan of child study. Discuss its chief purposes and pedagogical value.

11. What is the principal basis of sound educational judgment ? Explain.

History of American Education.

Joseph Neef; A Pestalozzian Pioneer.

By A. CARMAN.

PENNSYLVANIA may justly claim the credit of having the first Pestalozzian school for children in America. It was established in 1809 by Joseph Neef, at a spot then called the Falls of Schuylkill, some four miles from the old city of Philadelphia, now part of Fairmount Park.

Francis Joseph Nicholas Neef was born in Soultz, Alsace, December 6, 1770. He was educated for the priesthood, but at the age of twenty-one, when about to take orders, he gave up the idea of entering the church, as not being at all suited to his tastes. He entered the French Army under Napoleon, attaining high rank therein, and in the battle of Arcola was severely wounded in the head by a spent ounce ball, which he carried to the day of his death, a period of over fifty years. After leaving the army he became teacher of languages in Pestalozzi's celebrated school at Burgdorf, Switzerland, where he remained for some years, being then sent by Pestalozzi to Paris at the request of a philanthropic society whose attention and interest had been attracted to the good work being done at Burgdorf.

During Neef's stay in Paris, Mr. William Maclure, an American patron of education, science, and philanthropy, visited Pestalozzi's school, which had by that time been moved to Yverdun. Mr. Maclure was so favorably impressed by the rational methods employed in this school that he conceived the generous idea of establishing a similar institution near Philadelphia, where he was then living. Pestalozzi recommended to him his former coadjutor, Joseph Neef, as a man thoroly imbued with his principles and well fitted to introduce them into the Western world. Neef, when approached on the subject, hesitated, for, tho master of eight languages, he was ignorant of the English. Persuaded, however, that he could soon overcome this difficulty, he came to America, and such was his success that within a year he published a work of one hundred and sixty-eight pages in the English language, with the following descriptive title: "Sketch of a Plan and Method of Education founded on an Analysis of the Human Faculties and Natural Reason, Suitable for the Offspring of a Free People, and for all Rational Beings. By Joseph Neef (formerly a Coadjutor of Pestalozzi, at his School near Berne, in Switzerland,) Philadelphia, 1808."

This work is faultless as to grammatical construction, and was the first strictly pedagogical work published in the English language in this country. It would interest any modern teacher who has read the numerous pedagogical works of to-day to give this quaint little volume a careful perusal. There are now but half a dozen known copies in existence, one being in the state library at Indianapolis. Another work, Method of Teaching Children to Read and Write, was published by him in 1813.

Neef had in the school established at the Falls of the Schuylkill about one hundred pupils, most of them boarders, who were taught physiology, botany, geology natural history, languages, mathematics, and other branches, without the aid of a single text-book, a purely natural method being followed. "Neef's boys from the Falls," as they were known to Philadelphians, could, without exception, after being in the school for a short time work mentally the most difficult examples in arithmetic, converse with equal ease in several languages, and many who were his pupils have said in after years that the amount of scientific information and practical knowledge gained while under Neef's care had always been of incalculable benefit to them.

In 1813 he removed to Village Green, in Delaware county, Pennsylvania. David Glasgow Farragut was one of his pupils at this place. From here the school was moved to Louisville at the earnest solicitation of several Kentucky patrons. In 1826, when Robert Owen, of New Lanark, Scotland, began his famous socialistic experiment at New Harmony, Indiana, Mr. Neef took charge of the educational department of his community. In 1828 the community ceased to exist, and Mr. Neef removed to Cincinnati, and later to Steubenville, Ohio, where he engaged in his last school. He died at New Harmony in 1853.

The following extract is taken from his book published in 1808 : "The man of refined morality feels it to be his duty not only to be good, but also to inquire in what situation and thru what means he may be able to produce the greatest sum of good to his fellow creatures. It is my ambition and duty to become a useful member of society. The education of children and the rearing of vegetables are the only occupations for which I feel any aptitude. I have, therefore, seriously inquired in which of these two spheres I should produce the greatest advantage to the society of which I may become a member, whether by clearing and tilling some secluded spot of land, or by cultivating the pretty bewildered field of education. After mature deliberation I became fully convinced that in the latter capacity my faculties will be more likely to be beneficial to my fellow-creatures. These are my reasons for appearing as a teacher, or rather educator."

From *The Popular Science Monthly.*

QUESTIONS.

1. How did the first Pestalozzian school in America come to be established in Pennsylvania?

2. Give a brief biographical sketch of Joseph Neef.

3. What was the first strictly pedagogical book published in this country in the English language? (Note there was a German pedagogical book published in Pennsylvania before Neef's book.)

4. How and why came Neef to be chosen to demonstrate *Pestalozzi's principles of teaching* in America?

Francis Wayland Parker; Prophet and Propagandist.

A PUPIL'S PERSONAL APPRECIATION AND PROFESSIONAL INTERPRETATION.

DEAN RUSSELL, of the Teachers college, Columbia university, has well said that Col. Parker was so constituted as to be unable to conduct other than experimental schools; schools—I shall venture to explain in no spirit of fault-finding—avowedly faulty in organization and admittedly inconsistent in practice; schools empiric in method and unscientific in spirit, using all these terms in their accepted meaning—but ever in pursuit of the ideal and in search of ideas. Such experimentation, at whatever cost, was, in the Colonel's mind, justified by the gradually clearer formulation of his own ideal, while the practical realization therefrom of a practicable educational process—in other words, the demonstrated realization of his ideas in workaday form—would assuredly be hailed as a deliverance from scholastic bondage by the intellectual world of to-day. For we are at last growing consciously socialized and are beginning to recognize education as an evolutionary process of the race in its societary progress.

It was in the "Quincy Movement" that the true democratization of public schools received its initial impulse. Prior to 1875 they offered at best a mere popularization of the old scholastic idea of knowledge-getting for the individual ambitious to "better himself," with the inevitable result, to be sure, of leveling up the general average of intelligence and efficiency of the masses as producers and consumers. True, the Pestalozzian "Anschauungsunterricht" had secured doctrinal foothold at Oswego, and the traditional mechanics of the kindergarten were being toyed with as a handy device for the nursery of the well and better-to-do. Here and there a great teacher like Hailman was laboring, at best ill-appreciated and quite generally misunderstood.

But neither paedologist nor kindergartner had begun to pre-figure the child as a social factor needing to be more perfectly socialized in order that society might be consciously humanized. In short, that education is an institutional function of society evolved from its own activities and necessities. It was the individual child with and for whom even the best teacher concerned himself; the development of self, wholly heedless of the inevitable resultant, selfishness.

For it is community life, alone, that can develop this deepest and strongest of human, viz., the humane instincts. Observe how beautifully natural law would work if we but allow it full sway. On the one hand the child needs to be socialized and on the other society must be humanized, and it was the teaching of the greatest Teacher that the little child should lead us to our redemption. Every ethical, economic, and social problem is in some sort involved in the community life of the school, from kindergarten to university. Not by preaching nor by precept; not so much, even, by example, as by the conscious free choice between right and wrong in his social relations to his fellows, is the child trained in true morality, the sincere expression of one human soul in conscious endeavor to help another. And if it be democratic community life alone which can fully arouse and liberate this natural tendency of the child to altruistic self expression, should we not make this the conscious aim of education? This was the Colonel's final question based on the postulate that thus, too, the child may best gain knowledge, since in this way he cannot gain without giving.

Power.

But when a little over a quarter of a century ago Col. Parker returned to take charge of the common schools of Quincy, after a three years' leisurely study of pedagogics at Berlin, he had become, unconsciously, perhaps, a disciple of Diesterweg, that greatest of educational democrats. Pestalozzi had "left him cold," as the Germans say; for Fichte and Hegel he had acquired a consuming contempt; of Herbart he at that time seems hardly to have had an inkling—but Froebel's "Let us Live for our Children," and Comenius's "Learn to Do by Doing," had become *idées fixes*. And at the outset his chief concern was to attain freedom for the teacher and to maintain freedom for the child from the traditional scholastic courses and methods. Knowledge, he maintained, in itself, and as the end of education, supplies a totally inadequate motive, no matter how efficient the instruction, but its incidental acquisition, duly organized for educational ends, is quite another thing, it then being the teacher's proper function so to digest the body of knowledge suitable for his immediate purposes as best to further its acquisition for the "battle of life" while aiming primarily at the fullest mental, moral, and physical development of the child. Such, in effect, was the idea in those early Quincy days when "power" was the teacher's aim for the child; power to think and to do, to discern and to express. To think clearly, and to do well; to discern accurately and to express fluently – first, last, and all the time—mental, moral, and physical power.

And this power was then and there demonstrably achieved to a notable degree; while incidentally, far beyond the hopes, but never beyond the aspirations of the superintendent, even his school board's fundamental demand: "better spelling, writing, reading, and ciphering" came to pass. For the Colonel was a man of faith. "Seek first the Kingdom," he preached: "May all else be added," was his prayer. And thus word-cram, figure-drill, symbol-worship—in a word, the old-time efforts at training the "mind," postulated as a ready-made entity, were effectually demolished.

Character.

With the enlarged opportunities, the broader outlook, the freer environment, which were presented to him with the principalship of the Cook County Normal *school, the colonel* was prompt to change his tactics and to uphold a higher ideal. With his removal from Boston to Chicago he entered upon a period of conscious iconoclasm; of indefatigable propaganda. In place of "power," "character" became his educational aim.

It was a period of intermittent storm and continuous stress; a training school for the Colonel and his faculty as much as, if not more than for his pupil-teachers and their practice-pupils. Handicapped for lack of proper equipment and adequate appropriations in more ways than ever can be told; annually compelled to defeat new combinations of treacherous cabal and ignorant chicane, the school, nevertheless, steadily gained capacity as an institution, and friends as the very ark and shekina of the new education. Not so much as a model, but rather as an earnest of what a normal school should be, its power radiated throughout the land. "Psychology" became the watchword and "child study" the cult. "Correlation" and "concentration" were round-tabled from Dan to Beersheba, and fiercely waxed the warfare 'twixt Hegelians and Herbartians—the Colonel ever in the thickest of the fray. The century's last decade thus became more stimulating, ideally; more invigorating, practically, than any era thru which the science and art of teaching had previously passed. Nor was there less fecundity in the invention of devices or skill in the perfection of methods, but these were assigned to their proper place and proportion as tools wherewith to try and test pedagogic principles. The so-called "properties," "faculties," and "categories" of mind, as taught by the old psychology, were relegated to the limbo of exploded doctrine—to that bourne which the Germans call their "philosophische Rumpelkammer."

Meantime the Colonel was gradually delving deeper into the spirit of Froebel's philosophy after the doctrine of complete living, whereby the individual attains his highest efficiency in free activity and his greatest effectiveness as a member of the social organism, being "members one of another," according to the Pauline conception of *the brotherhood of* man embraced in the fatherhood of God. Under this higher inspiration he taught at first, but tentatively, that "character" is but a vague conception, after all, unless translated into terms of action, *i. e.*, until socially tested and not found wanting in the individual's self-adjustment as his neighbor's keeper; as the creator no less than the creature of his environment.

Here it chanced that John Dewey was called to teach at the University of Chicago, and his academically trained, intellectually logical mind, the very antipode of the Colonel's emotional intuitions, formulated this apothegm: "The school is society shaping itself; education is not a preparation for living—it is life, and proceeds on the participation of the individual in the social consciousness of the race." This was the Colonel's old, dimly discerned *apercu* brilliantly crystalized. Forthwith, he made this the text of all his preaching and the conscious aim of all his teaching.

In retrospect the Colonel at that time humbly admitted that but little progress had been made, except to demonstrate that the old ideal of knowledge-getting was wrong; that the acquirement of power for its own sake is but an incident; that character-building is not of itself a sufficient end—but that society is the redeeming, and ultimately will be, the redeemed form of man. It was on this basis he took a new start.

Society.

For a motto to what was, perhaps, his most famous lecture, that on "Education Into Citizenship," Colonel Parker quoted Bismarck's pedagogic precept: "Whatever you would have the state be, that be sure to put into the school." Whether machinists or mechanics, servitors or servants, dreamers or drummers—the sort of subject desired or required can readily be turned out by the schools. While the czar, for instance, prefers unthinking subjects, the kaiser can make better use of intelligent ones; wherefore, each in his way insists on *such schooling as* habituates (automatizes) his "subjects" from earliest childhood to obey and reverence the constituted authorities, or else to exercise authority, with the least possible friction, over those of lower rank in the military, bureaucratic or enconomic scale. Such is the autocratic ideal.

But a democracy which assumes to guarantee freedom of thought, speech, and action, requires the free school to mature and equip free men. Wherefore, the Colonel contended, that education, in the American sense and for the American state, means, first and last, the evolution of individual and communal self-government; and he further contended that, therefore, each school should constitute an ideal community in which each pupil, to his best and fullest ability, may be enabled and encouraged to exercise the functions of free citizenship. And he held that since the evolution of such citizenship requires the amplest and most perfect opportunities for the harmonious exercise of the pupil's physical, mental, and moral activities—in a word, the freest exercise of self-expression—intellectual power, physical training, and moral character would inevitably be the educational by-products of such educational community life.

At any rate, the ideal of community life instantly and intuitively appeals to young children, and, as the child develops under it, civilization, too, must inevitably expand and advance. Wherefore, the ideal of community-life is the only ideal intrinsically moral and practically religious.

Such was the Colonel's latest doctrine and last appeal, and while his first and second ideals—that of power at Quincy, that of character at Normal—were convincing to men unbiased by tradition and unfettered by convention; this final ideal, comprehending these as mere incidents, his social ideal has chiefly enlisted the emotional and devoted co-operation of women to a degree even more marked. Wherefore, the Colonel leaves few disciples, but many devotees.

In conclusion, one may say : that in the death of

Francis Wayland Parker, the cause of educational reform in this country lost its most picturesque propagandist. To a rare degree this idolized champion of childhood combined the uncompromising aggressiveness of a born fighter with the emotional persuasiveness of a blind fanatic. He was an iconoclast of formalism and a worshiper of freedom. All rule and rote and not merely the mechanized pedantry of scholasticism were so abhorrent to Colonel Parker that he would not even tolerate conventional order or traditional learning. His incessant, clamorous, unyielding demand was for "freedom;" freedom of the teacher from "regulation," and of the pupil from "discipline"—using these terms in their accepted pedagogic sense. In this regard it may be claimed that Colonel Parker was lacking in proper perspective and due proportion. His methods, in a word, were revolutionary rather than evolutionary. Moreover, he lacked constructive and, even more, executive capacity. As a destructive critic, as an emotional propagandist, his peer has, perhaps, never been known in educational history. There was need of him, and he gave himself.

But little short of two years ago, Colonel Parker reached the zenith of public and professional appreciation when the twenty-fifth anniversary of his election as superintendent of schools in Quincy was celebrated in the old presidential town by as rare a gathering of progressive educators as ever united to honor a teacher, and all signs then seemed to presage at least a decade more of activity fruitful at last in the practical demonstration of the practicability of his loftiest theories, ripest doctrines, and latest methods. But it soon became apparent to those having most intimate and sympathetic insight into their master's character that, with the loss of his wife, he also lost his grasp of affairs and his grip on himself. At first the decline seemed merely physical, but in the end death came in timely mercy.

As a matter of fact *his* work was done; the prophecy of the seer, the apostle's propaganda, were no longer *needed; the times* were ripe for the constructive philosophy of our G. Stanley Halls and John Deweys; the practical capacity of our Nicholas Murray Butlers and Thomas M. Balliets. So the dear old Colonel would not have us mourn him. But those who came under his inspiring, his vitalizing influence, must. And our firm faith is that his memory will be enshrined with that of the other devoted dreamer and yearning lover of childhood—Friedrich Froebel. E. W. KRACKOWIZER.

Milwaukee, Wis.

A New Zealand Tribute to Col. Parker.

Col. F. W. Parker, the American educational writer and worker of international fame, died recently. His reforms at Quincy inaugurated "the new education," which has enormously vitalized and quickened school work in America. The increased attention given to nature study, the use of supplementary readers, and the subdual of the text-book to its proper functions are only some of the forms in which Parker's permanent influence on educational practice manifested itself. Teachers in New Zealand know him best by his "Talks on Teaching," one of the greatest of the books on method. The publishers of THE SCHOOL JOURNAL are assisting the movement to erect some monument to the memory of the author, by issuing a huge edition of the book at half-price (60 cents post free), one-sixth of the price to go to the national memorial subscription fund. Our teachers have thus an opportunity of getting, on exceptionally cheap terms, one of the most helpful of books and, at the same time, of doing worthy honor to one of the giants of the profession.

—New Zealand *Schoolmaster.*

A limited number of copies of the Memorial Edition of Parker's Talks on Teaching are still unsold. Subscribers to EDUCATIONAL FOUNDATIONS who wish to secure this valuable work should order at once. As a special club offer we will give EDUCATIONAL FOUNDATIONS one year, price, $1.00; *Our Times*, one year, price, 50 cents, and Talks on Teaching, price, 60 cents, for $1.90.—[THE EDITORS.]

Pedagogical Classics.

Rabelais' "Gargantua and Pantagruel."

By J. WELTON, M.A., "University of London Correspondent."

THE Renaissance did not meet with a hearty welcome from the representatives of learning and orthodoxy in France. Nevertheless France produced in François Rabelais one of the most characteristic figures of the early sixteenth century—a man of immense learning, deep wisdom, and yet at the same time of an almost incredible coarseness.

Born about 1485 and destined by his father for the church, he was early sent to a Benedictine monastery. Whilst in the houses of this order he was allowed full play to his ardor for study, and he made some powerful friends whose protection afterwards stood him in good stead. In an evil hour for him he left the Benedictines and joined the Franciscan convent at Fontenay le Comte, where he remained for fifteen years, taking orders at the age of twenty-eight. To the Franciscans, however, all study was a mere waste of time, and that of Greek a deadly sin; to Rabelais, on the other hand, such pursuits were as the very breath of his nostrils. As a result his life was one long series of annoyances, mortifications, and persecutions, and there was engendered in his heart that undying hatred of mediæval monasticism, which breaks out in every page of his writings in invective, in the most bitter satire, or, less frequently, in sorrowful pity. At length—about 1520—a raid by his superiors on his cell revealed the fact that Rabelais possessed books written in Greek. As a punishment the rebellious friar was condemned to perpetual imprisonment on bread and water. By some means his friends contrived to secure his escape, and he obtained the Pope's permission to leave the Franciscans and return to the Benedictines. Of the former half of this permission he availed himself; the latter he ignored.

Thus at the age of forty he began his free life—a man already of much erudition and with an insatiable thirst for knowledge, but with many of the finer sensibilities of his manhood blunted by the long years spent in the cloister. Study in all its branches now engaged his full energies. When nearly fifty years old he actually entered the University of Montpellier to pursue the course in medicine, and two years later we find him practicing as a physician at Lyons. It was here that he began to write the great work which was to render him immortal. Hitherto he had written books for the learned; now he appeals to a wider public whom he attempts to teach and influence even whilst amusing them. Nor was he unsuccessful. Of the first part of the "Gargantua" Rabelais says himself with a mixture of pride and contempt, that more copies were sold in two months than of Bibles in nine years. The years 1533 and 1534 saw the issue of the first two books of the great romance; the third was not published till 1546 and was then issued under the protection of "royal privilege." In 1551 he was appointed curé of Meudon—a place with which his name is frequently associated—but he resigned it after two years, and a month later issued the fourth book—one of the most bitter satires against abuses in the church ever written. Fortunately, perhaps, for himself Rabelais lived but another month, not long enough for him to experience the results of his daring. He died in April, 1553, saying with his last breath, as tradition hath it, "Draw the curtain: the farce is played." Nearly ten years later the fifth book, which had been left finished tho unrevised by Rabelais, was given to the world—and one of the most remarkable works in all literature was complete.

Before the close of the sixteenth century the book was translated into English, and there are several direct references to it in Shakespeare. The best known English version is that of Urquhart, which was first published in 1653. This was completed by Motteux, a French merchant resident in London in 1708, and remains the standard translation. More adapted to general circulation, however, is a set of extracts by Sir Walter Besant, entitled "Readings in Rabelais," in which we have most of the wisdom of Rabelais without any of his coarseness.

Of no book, probably, have men held such contradictory opinions as of "Gargantua and Pantagruel." Based on old French nursery stories and tales of chivalry, purposely full of exaggeration and burlesque, the stories relate the adventures of the giant Gargantua and his equally gigantic son Pantagruel. Of plot in the ordinary sense there is none, and the book is, therefore, one of whose contents it is not possible to give a brief and yet complete abstract.

The chief events in the earlier part—the Gargantua—are the two educations of Gargantua, first in the scholastic manner and afterwards in that of the new Humanism; the war between Gargantua's father—Grandgeusier—the embodiment of unambitious and unaggressive monarchy—and Picrochole, king of Lerne, the type of an ambitious and unscrupulous government, bent on conquest; and the founding of the Abbey of Thelema—the very antithesis of mediæval monasteries—with its one rule *Fay ce que vouldras.* The latter part—the "Pantagruel" is much less consistently extravagant. The hero frequently becomes merely human—the type of the calm and good king, reminding us often of Tennyson's king Arthur. We have said "the hero," and yet, perhaps, the real hero of these later books is Panurge, a companion picked up by Pantagruel in Paris. After some warlike adventures parodying the romances of chivalry, Panurge desires to get married, and a whole book is occupied with his devices to determine the wisdom or unwisdom of that step. The end is that it is decided to consult the oracle of the Dive Bouteille, and the last two books detail the voyage made on this quest and give account of the marvelous countries visited and the wonderful things seen. At last the oracle is reached, and the whole answer received is the one word *Trincq* as the solution not only of the doubts of Panurge, "but also," as Mr. Saintsbury says, "as a general answer to the riddle of the painful earth."

Such a sketch as this can, of necessity, give no data for judging the value of Rabelais' work. In England it has not been generally popular. As Andrew Lang says in his "Letters to Dead Authors": "But for thee, Master Françoys, thou art not well liked in this island of ours . . . . yet thou hast thy friends, that meet and drink to thee and wish thee well wheresoever thou hast found thy *grand peutétre.*" Amongst these friends was Coleridge who wrote: "Beyond a doubt Rabelais was among the deepest, as well as boldest, thinkers of his age," defended him against the charge of moral depravity, and classed him "with the greatest creative minds of the world—Shakespeare, Dante, Cervantes, etc." "Never," says he, "was there a more plausible, and seldom, I am persuaded, a less appropriate line than the thousand times quoted 'Rabelais laughing in his easy chair' of Mr. Pope."

In our own day Sir Walter Besant has taken up the cudgels in Rabelais' behalf: "In the *Comédie Humaine* of Rabelais, we are taught by allegory, by parable, or by direct admonition in every page. The man's head is full of learning, and his heart is full of his fellow-creatures. Even in his maddest and most extravagant moments there drops a word of wisdom, unexpected, in the midst. In Rabelais there is no pure fooling." And Mr. Saintsbury speaks similarly: "There was in Rabelais a knowledge of human nature, and a faculty of expressing that knowledge in literary form, in which he is inferior to Shakespeare alone. Caricatured as his types purposely are, they are all easily reducible to natural dimensions and properties; while occasionally, tho all too rarely, the author drops his mask and speaks gravely, seriously, and then always wisely." On the other hand Hallam says: "Few books are less likely to obtain the praise of a rigorous critic; but few have more the stamp of originality, or show a more redundant fertility, always of language, and sometimes of imagination. . . His reading is large, but always rendered subservient to ridicule ; he is never serious in a single page, and seems to have had little other aim in his first two volumes than to pour out the exuberance of his animal gaiety. . . . . the vein of merriment becomes gradually less fertile, and weariness steals on before the close of a work which had long amused while it disgusted us."

Of these opposed criticisms we think the truth lies with the former rather than with the latter, and to this opinion most critics both in France and in England seem to be coming. Indeed these latter years have seen a revival in the study and in the renown of Rabelais. Constructively he is greatest as an educationist. In his scheme as set forth in the second education of Gargantua, and in the wonderful letter of Gargantua to Pantagruel—unfortunately not included in Sir W. Besant's "Readings"—we see an ideal of harmonious training of body and mind. Too much emphasis is, doubtless, laid on mere learning, as was natural at the time, yet it is a scheme not only far in advance of the practice of the time at which it was conceived, but to which in its width and depth of wisdom we can scarcely be said to have as yet advanced. In Panurge, too, the great lesson of the latter that "Wisdom entereth not into a malicious mind, and that knowledge without conscience is but the ruin of the soul" is brought home to us. Panurge is the perfect example of the intellect cultivated to the highest point with the whole moral nature neglected and as a consequence dead. Who will say that the warning is unneeded in our day?

QUESTIONS.

1. Why is Rabelais's "Gargantua" considered a pedagogical classic?
2. Give a brief biographical sketch of Rabelais.
3. Effect and success of Gargantua in its time?
4. Give an outline of the structure of Gargantua.
5. Rabelais says that "Knowledge without conscience is the ruin of the soul." Discuss this.

Teachers' Examinations.

New York State Uniform Examinations.

GRAMMAR.

1 It is impossible for the thoughtful student of history to
2 walk across Trafalgar Square, and gaze on the image of the
3 mightiest naval hero that ever lived, on the summit of his
4 lofty column and guarded by the royal lions, looking down
5 towards the government house of the land that he freed from
6 the dread of Napoleonic invasion and towards that ancient
7 church wherein the most sacred memories of English talent
8 and English toil are clustered together,—it is impossible, I
9 say, to look at this, and not admire both the artistic instinct
10 that devised so happy a symbolism, and the rare good for-
11 tune of our Teutonic ancestors in securing a territorial posi-
12 tion so readily defensible against the assaults of despotic
13 powers.—*John Fiske.*

1. Classify according to note 1 the following clauses: (a) *that lived* (line 3); (b) *he freed* (line 5); (c) *memories are clustered* (lines 7 and 8); (d) *it is impossible* (line 8); (e) *I say* (lines 8 and 9).

2. Give three modifiers of (a) *looking* (line 4); and three of *position* (line 11).

3. Select five adjective phrases, and five adverbial phrases, (each composed of a preposition and noun), exclusive of any phrases previously selected.

4. Parse (a) *impossible* (line 1); (b) *that* (line 10).

5. Parse (a) *gaze* (line 2); (b) *guarded* (line 4).

6. State what each of the following words connects: (a) *that* (line 3), (b) the first *that* (line 5); (c) *wherein* (line 7).

7. Select all the verbs in the indicative mode, classifying them as transitive or intransitive, and if the former, state whether they are in the active or passive voice.

8. Give syntax of (a) *looking* (line 4); (b) *securing* (line 11).

9. Write a sentence (a) whose subject is a clause; (b) whose predicate contains a clause used as attribute predicate (nominative). In each case underline the clause.

10. (a) Give an example of an improper use frequently made. of the verb *lay*, and of the colloquial word *don't*. (b) Correct the examples given, and state reason for each correction.

ANSWERS.

1. (a), (b), (c) Are subordinate adjective clauses; (d) principal; (e) parenthetical.

2. (a) *Down*, *towards government house*, *towards church*; (b) *a*, *territorial*, *defensible*.

3. *Of history*, *of hero*. *of column*, *of land*, *of invasion; on image*, *from dread*, *by lions*, *against assaults*, *on summit.*

4. (a) *Impossible* is an adjective in the predicate and modifies the subject of is, which may be regarded as *it*, of the expression *for the thoughtful student*, etc.; *that* is a relative pronoun, third person, singular number, neuter gender, nominative case, subject of *devised.*

5. *Gaze* is a verb, gaze, gazed, gazing, gazed, regular, intransitive, infinitive, present, used with its subject student as the object of the preposition *for; guarded* is a verb, guard, guarded, guarding, guarded, regular, transitive, passive voice, past participle in form, modifying *image.*

6. (a) *hero* and *lived;* (b) *land* and *freed;* (c) *church* and *memories are clustered.*

7. Transitive : active, *freed*, *say*, *divised;* passive, *are clustered;* intransitive : *is*, *lived.*

8. (a) *looking* is a present participle, modifying image; (b) securing is a participle, used as noun or gerund, the object of *in.*

9. (a) *That you have wronged me appears in this.* (b) It is impossible *that this is true.*

10. (a) *Lay* down for *lie* down. Lay is a transitive verb and may be used only with an object as, He lays the book down. (b) He don't for he *doesn't;* don't is plural.

ARITHMETIC.

1. (a) Define and give example of (a) composite number; (b) divisor; (c) common divisor; (d) greatest common divisor.

2. Four commercial travelers leave the home office on Thursday, January 2, 1902, on circuits of 4, 8, 12, and 16 weeks' travel respectively. If they continue traveling every week repeating their circuits, on what date will all first meet again at the office?

3. The numerator of a fraction is six-fifths of the denominator and the sum of the numerator and denominator is 319; what is the fraction?

4. What is the length of a plank 1½ in. thick, 1 ft. 6 in. wide, containing 36 board feet?

5. For how much must I make a 30-day note, without interest, that I may realize $350 if discounted at 6%?

6. How many days will be required for 6 men to build 7 machines, if 12 men build 40 machines in 9 days? (Solve by proportion.)

7. Two-thirds of 12 is 12½ times $\frac{1}{25}$ of what number? (Give full analysis.)

8. If it cost $510 to fence a field 72 rd. by 98 rd., what will it cost, at the same rate, to fence a square field of the same area?

9. What must be the height of a bin 10 ft. long and 4 ft. wide to hold 10 tons of coal, allowing the weight of a cubic foot of coal to be 56 lbs.?

10. A note for $400 dated January 2, 1901, and bearing 5 per cent. interest, has the following indorsement: September 2, 2, 1901, $150. How much is due on January 2, 1902?

ANSWERS.

1. (a) A composite number is one that is made up of two or more factors other than 1, as 6. (b) A divisor of a number is a number that is contained in the number without a remainder. (c) A common divisor of several numbers is one that will exactly divide each of them. (d) The greatest common divisor of several numbers is the greatest number that will exactly divide each one of them.

2. December 4, 1902.

3. $\frac{174}{145}$

4. 16 ft.

5. $351.75.

6. 3 $\frac{3}{26}$ days.

7. Two-thirds of 12 is 8. If 8 is 12½ times 1-25th of a number 1-25th of the number would be 1-12½ of 8 or 16-25. If 16-25ths is 1-25th, the number would be 25 times 16-25th or 16.

8. $504.

9. 8.92 ft.

10. $267.72.

METHODS AND SCHOOL ECONOMY.

1. What should be the character and the scope of the work in arithmetic the first three years of school?

2. Give an example of (a) analytic method in teaching: (b) synthetic method.

3. Name in the order of preference the three directions from which light might properly enter the school room, with reference to the pupils.

4. Give a program for opening exercises in a grammar grade in a school in which there is no general assembly.

5. (a) In the inspection of pupils' written lessons, should all the papers of all the pupils be examined? (b) Give reasons for your answer.

6. Give two reasons why the teaching of reading is of especial importance.

7. Discuss the value of poetry in (a) primary grades, (b) advanced grades.

8. Give a plan for teaching current topics, that will give each pupil definite work, and keep the whole class well informed upon important current events.

9. (a) State an argument in favor of vertical writing; (b) an argument against it.

10. In what way should the length of the recitation be affected by (a) the grade of the pupil; (b) the subject studied; (c) other conditions?

ANSWERS.

1. It should be mainly concrete and aim at accuracy and rapidity of occupation. Its scope should be as extended as the capacity of the pupil and the skill of the teacher will allow.

2. (a) Teaching geography by beginning with the globe and proceeding to the parts that compose it. (b) Teaching the

same subject beginning with the town and proceeding to the county, state, etc., until the whole world is reached.

3. From above, from the left, from behind.

4. Singing, roll call, short talk on current events.

5. (a) Yes ; (b) because there is little value in the work without it.

6. Because it is the chief instrument in gaining knowledge and because children do not learn to read well without much attention from the teacher.

7. (a) It appeals to the child mind, cultivates imagination, stores the mind with gems of thought ; (b) It cultivates taste, judgment, language, enlarges the vision, inspires students with high ideals, and gives them food for reflection.

8. Divide the work into parts, as home politics, foreign politics, science, literary, etc, and appoint pupils to have charge of each section. Reports from the various sections may be had as often as seems advisable and given before the whole school.

9. (a) It is plain. (b) It is a slow way of writing.

10. (a) Shorter periods for lower grades ; (b) Longer periods for subjects requiring more class-room work ; (c) Time at disposal of teacher must be used most economically.

(August 14 and 15, 1902.)

AMERICAN HISTORY.

1. (a) In which colony was the first representative assembly held? (b) Give its name and the date of its meeting.

2. (a) Which colony was the first to pass an act tolerating freedom of Christian worship? (b) What man was the first to resist the religious intolerance of the Puritans?

3. Name five New England colonies and state one important fact in connection with the history of each.

4. Give a historical event connected with the name of (a) Ethan Allen; (b) Paul Revere; (c) Patrick Henry; (d) Anthony Wayne.

5. (a) What movement of the British forces was planned for the year 1777? (b) What object had the British in view in attempting to carry out these plans?

6. (a) What great American invention was made during the administration of Washington? (b) What effect did this invention have on the subsequent industrial and social life of the country?

7. (a) What was the principal question at issue in the admission of new states into the Union prior to 1860? (b) How was the difficulty usually adjusted?

8. (a) Mention two important events of Andrew Jackson's administration. (b) Give a brief account of one of the events mentioned.

9. State fully the causes of the war between the United States and Mexico.

10. (a) Who invented the Monitor? (b) What important service did the Monitor render?

BOOK KEEPING.

1. Define, as applied to book-keeping, (a) account; (b) balance; (c) check; (d) discount; (e) invoice.

Brinker & Company, Grocers, Niagara Falls, bought of Philip Becker, Buffalo, on August 1, 1902 (terms, one half cash, balance a note for 30 days), the following: 20 cases of canned tomatoes at $2.70; 25 cases canned corn at $1.50; 40 cases canned peas at $2.30; 27 cases canned peaches at $4.50.

2. Write out in proper form the invoice showing the above transaction.

3. Write the note mentioned in the terms of sale.

4. Write a check on the bank of Niagara in settlement of the cash condition.

The following is taken from the memoranda of Brinker & Company: August 2, 1902. Sold Thomas Stowell, on account, 5 barrels Thornton and Chester flour at $5.50, 150 lbs. of lard at 12c., 25 dozen eggs at 23c. Sold E. A. Butler 2 lbs. of coffee at 35c., 1 lb of tea at 50c., 2 dozen oranges at 40c., and received in part payment 6 dozen eggs at 18c., balance charged to account. August 4. Sold T. J. Tierney for cash, 1 barrel of Thornton and Chester flour at $5.50, 25 lbs. of lard at 12c., 5 lbs. of raisins at 10c., 12 lbs. rolled oats at 5c. Received of Thomas Stowell on account $25. Paid cash for repairs on store $17.25, cartage $2. August 5. Bought of Francis J. Leggett, New York, 10 barrels sugar, 3280 lbs., at $4.92 per hundred, 3 chests Jap. tea, 240 lbs., at 38c., 200 lbs. Rio coffee at 16c. (Terms, 30 days, or 2% 10 days.)

5–6. Using proper forms, conventions, and abbreviations, enter above transactions in day book and cash-book.

7. Post all accounts.

8. Balance cash-book and all ledger accounts.

Brinker & Company notify Francis J. Leggett that they accept the 2% 10 days' terms. Leggett draws upon them immediately at 10 days' sight; the draft is accepted.

9. Write the draft showing acceptance.

10. Write a negotiable, interest-bearing note, time 30 days, given August 5, 1902, by Thomas Stowell, in payment of his account in full.

GEOGRAPHY.

1. Define (a) meridian; (b) parallel. (c) What meridian is commonly accepted as the prime meridian? (d) What may appropriately be called the prime parallel?

2. Define (a) mountain system; (b) mountain chain; (c) plateau. Name and give location of an example of each.

3. Designate a section of the United States which is mainly (a) a manufacturing section; (b) a mining section; (c) a grain growing section; (d) a grazing section.

4. Trace a probable route from New York to the Philippine

islands (a) going in an easterly direction; (b) leaving New York in a westerly direction.

5. Name four large islands of the West Indies and state the form of government in each.

6. Name and give the location in South Armerica of (a) three capes; (b) three large rivers; (c) a lake.

7. Give the name and location of (a) three peninsulas of Europe; (b) three islands of the Mediterranean; (c) three seas which indent the European coast.

8. What is (a) the chief seaport of Egypt; (b) the capital city; (c) the title of the chief ruler?

9. Give the name and location in Central America of (a) three republics; (b) one important city; (c) one lake.

10. State the causes of the rapid growth of Buffalo from a small village in 1825 to a city of 352,387 population in 1900.

HISTORY OF EDUCATION.

1. State why teachers need to be familiar with the science and the history of education.

2. What four things, besides fortune, did Locke declare a gentleman ought to desire for his son?

3. Name two important subjects treated very fully in the reports of Horace Mann.

4. Compare the educational system of the Jesuits with other educational systems of the 16th, 17th, and 18th centuries.

5. Give (a) Roger Ascham's most noted work; (b) the name of his most noted pupil; (c) his method for studying languages.

6. Write a brief account of the educational work of Froebel.

7. Name some inventions, discoveries, and social conditions that contributed to the revival of learning at the close of the dark ages.

8. (a) What science did the Mohammedans originate? (b) In what mathematical subjects did they make great advances?

9. (a) Who was the most popular teacher of scholasticism? (b) With what great school was he intimately associated?

10. Give an account of examinations for degrees in China.

CURRENT TOPICS.

1. (a) What was the purpose of Governor Taft's recent visit to Rome; (b) the result of his negotiations?

2. State the general terms under which the Boer war was ended.

3. Give an account of an event of national importance which occurred at West Point a few weeks ago.

4. Describe briefly the coronation of Edward VII. which was to have taken place in June, as to (a) preparations for the event; (b) disappointment of the people.

5. For what is each of five of the following named persons

principally noted: John Burroughs, John Mitchell, Gen. Leonard Wood, Michael Henry Herbert, Charles B. Aycock, M. Jules Cambon, Woodrow Wilson, Charles William Eliot?

6. Write on the destruction of Martinique, giving all the principal facts.

7. Give (a) the names of two authors of international fame who have died since April 1, 1902, and (b) the name of one work written by each.

8. Write on the "coal strike" as to (a) causes; (b) extent; (c) present status; (d) general effect on the business interests of the country.

9. What event has recently attracted public attention to (a) Paterson, N. J.; (b) Johnstown, Pa.; (c) Stony Point, N. Y.?

10. Name one of the following who died recently: (a) a well known officer of the navy; (b) a Protestant minister of great reputation; (c) a Catholic bishop.

CIVIL GOVERNMENT.

1. (a) Mention three purposes for which real estate may be taken for public use, against the owner's will. (b) What name is given to the right to thus appropriate private property?

2. Name three classes of male citizens of full age to whom the right of suffrage is denied in this state.

3. By what legal process can a fugitive from justice be returned to the state in which the offence was committed?

4. By whom are standing committees selected in (a) the house of representatives; (b) the senate of the United States?

5. Mention the two ways by which an act of the legislature may become a law without the governor's signature.

6. (a) Name the three coördinate and independent departments of the national government. (b) Why should they be independent?

7. (a) How many judges comprise the court of appeals? (b) What is their term of office?

8. Mention three individual rights guaranteed to every citizen of this state by the constitution.

9. What state officer has supervision (a) of the canals; (b) of state expenditures; (c) of Indian schools?

10. What are the constitutional provisions as to eligibility to the office of president and vice-president of the United States?

SCHOOL LAW.

1. What certificates may be renewed by a school commissioner without re-examination?

2. State two important reasons for keeping a correct record of attendance of pupils.

3. (a) What officer may direct the trustee of a common

History of Our Times.

In nearly all the states a knowledge of current events is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort. The articles are brief and all useless matter is omitted. If in reading the paper you frequently refer to the Cumulative Index, especially when any topic is referred to more than once, you will be surprised at the wealth of knowledge the little paper contains.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

Questions on Current History.

(See *Our Times* of September 1 and September 15.)

Describe the great war game and explain its object.

Give the main features of the anthracite coal strike. Why has it caused loss and inconvenience to millions of people?

Why is the education bill in England so bitterly opposed?

Where did the president go on his tour and what important subjects did he touch upon in his addresses?

Tell about some important people who have died during the past month.

What is the cause of the failure of the Russian colonists in Canada, known as the Doukhoborsti?

Describe the visit of Emperor William to Polish Prussia.

Why are the Latin countries of America urged to combine?

Where is Acre and what has lately called attention to the dispute regarding it?

Where have ocean cables been laid?

What was the first case heard at The Hague?

Describe the eruptions in the West Indies of August and September.

What great point was lately gained by Cape Colony's prime minister?

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A Monthly Magazine of Pedagogy and General Culture for Teachers, Normal Schools, Training Classes, Reading Circles and Home Study

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Educational Foundations

Ossian H. Lang, Editor.

VOL. XIV. NOVEMBER, 1902. No. 3

The study of theoretic pedagogy is as necessary to solid success in teaching as is the study of the laws of perspective to the painter and the study of the laws of harmony to the composer of music. Teaching is an art. There is no longer any question about this. Teachers are born as truly as are other artists and they are just as much in need of as thoro a preparation and as constant a continuation of the study of their art. If the detractors of the study of educational theory would look intelligently at the meaning of their oft-quoted argument of "born" teachers they would be less liable to occupy an unenviably ridiculous position in debate.

Of course, there are spurious kinds of pedagogy. Quacks possessing the gift of oratory frequently succeed in securing a prominent place on the programs of teachers' institutes and associations. There are, too, people who shine in their own circles as distinguished artists, and whose hand-painted abominations and defiance of the laws of harmony and abuses of musical instruments proclaim the delusion under which their admirers labor. It is lack of taste, or, call it stupidity, that worships as art what, to the real artist, is a most painful and discouraging evidence of a low state of culture.

Pedagogy is, perhaps, the youngest of the sciences of art, and thus it is not surprising that many false gods are worshiped in its name. Nevertheless, this does not release any one of us from the duty of dispelling the idolatry and ignorance responsible for the slow development of professional knowledge and proper perspective among the teachers of our country.

It has been the sole purpose of EDUCATIONAL FOUNDATIONS from its first beginning, to supply the aid and suggestion and material that will really stand the test of time and develop a body of professional men and women who can distinguish between educational good and evil, and with whom the welfare of the souls and bodies and future social usefulness of children is more than idle profession or a thin cloak. Not the painting of sepulchers nor the building up of mausoleums, not pretense of any kind, but the presentation of living truths and of discussions which will stimulate life and spread the light of sound educational theories—these are the things aimed at in these pages.

There is abroad a feeling that a book might serve better for acquiring a professional equipment than separate articles. To be sure, good, strong, meaty, sound books are excellent helps, and the literature of pedagogy contains several titles of works that are inexhaustible sources of educational inspiration and invigoration. But, after all, the number is small, and aside from the classics there are few books that are to be depended upon from beginning to end. Usually the author claims too much for himself and his point of view, and a right reading of his book requires caution born of already established professional judgment.

These notes may aid readers in placing a right estimate upon the material in the present number.

The series of articles on the study of the great master paintings of the world will begin with the next number. In the department of child study there will be a discussion of "Types and Temperaments."

Several subscribers of EDUCATIONAL FOUNDATIONS have requested the regular appearance of the department of educational classics. The editor had planned to introduce it every other month, but the evident interest in it has led to a slight change in the orginal outline of this year's course, and, beginning with the December number, there will be each month several pages of extracts from the most important classics in pedagogical literature. Next month the selection will be from Richter's wonderful "Levana."

School Administration.

The School and School Life.

By SUPT. C. B. GILBERT, Rochester, N. Y.

A SCHOOL is a social institution. Reduced to its lowest terms the society consists of two—a teacher and a learner. As ordinarily found it consists of a teacher and several learners. It is a unity in variety. There is severalty in its composition, unity in its aim. Yet this unity of aim is different from that in an industrial institution. The school aims not to put forth a single, common product as does a factory. The product is as multifarious as the component parts of the community. It is individual, not common. But the life is common in its aim, its method, and its spirit. There are community of interest, community of purpose, community of means and activities, but not community of product.

To keep this balance, so that the common life shall be preserved and at the same time the individual need and the individual aspiration satisfied, so that each shall contribute to the general welfare and at the same time derive the utmost individual good from the common life, this is the great problem of school administration.

The bond which makes the school a community is spiritual, not material. It is not the one room in which they live, nor the one course of study which they pursue, nor the uniform text-books which they use, but rather the community of aim, the unity of spirit which actuates them.

Dr. Arnold Tompkins has said that a school is a spiritual union of teacher and pupil. This is true of the school in its lowest terms. It is equally true that an ideal school of larger size is a spiritual union of teacher and pupils. It is not merely a union of the teacher with each pupil, nor with the school as a whole. It is rather a union of all with all. The union of pupil with pupil, of each pupil with all the others, is quite as essential as that of the teacher with the pupils. The teacher is the active, conscious, unifying force. Only such a school can serve the real *end of education, which is social efficiency* in each individual member of the community.

A school, then, is a community, consisting of teacher and pupils who are living together a conscious, purposeful life; whose aim is the growth of its members in knowledge, wisdom, righteousness, and social efficiency.

This school community has as its unifying agencies its common ideals, its morale, its conventions, its occupations. The last mentioned make the most notable and generally understood factor of the school life.

These four elements constitute a single life; they cannot be separated. Even if those who direct the school administration are unconscious or regardless of some of them, they are all present. School life, like all spiritual and community life, is composed of these elements, and here, as everywhere, all conscious or unconscious ignoring of any of them brings disaster.

Many a hard working, conscientious teacher struggles so earnestly to secure certain results in the more manifest phases of school life, as learning and the observance of school conventionalities, that the common ideals and the true morale are lost sight of, with the result that the life as a whole is on a low plane and the training for social efficiency is either negative or positively evil. This is especially apt to be the case when marks, prizes, and examinations are the stimuli and criteria employed. When secondary ends rather than primary are placed as the objects of effort, the life as a whole is low and hence the training as a whole is toward evil habits of thought and is distinctly degrading.

Hence in planning and conducting the administration of a school, immediate and patent "results" must often be subordinated to more remote and less obvious ends. In the education of souls, material and manifest criteria are dangerous and need to be employed with great discretion. The individual who can answer the most deftly the greatest number of questions is by no means always the most successful or useful member of society, and the school whose pupils can secure the highest marks in examination is by no means always the best school. It does not necessarily even impart the most knowledge. It is the school life in its entirety that counts in preparation for the larger life of the larger society of after years.

For the sake of clearness, however, it will be necessary to deal somewhat separately with the various elements of school life, *ideals, morale, conventions,* and *occupations,* and it will be simpler to treat of the last first, since the spirit, method, and subject matter of school occupation constitute the principal factor aside from the teacher himself in determining the character of the school life.

School Occupation.

The popular statement of the purpose for which children go to school is "to learn." The accumulation of knowledge is the conspicuous motive of the occupations which employ their time while there. This is inevitable. The possession of knowledge is unquestionably one of the absolutely essential conditions of successful living and, besides, it is one of the most easily tested results of effort. Hence in the average school all effort centers in this one aim. Children do go to school to learn and if they learn, especially if they learn those things which have become the conventional requirements of school, parents and teachers are usually satisfied.

Knowledge, however, important as it is, is but one of the desirable results of school activities. Indeed, unless it is accompanied by others, knowledge itself is nearly valueless. Acuteness of perception, judgment, reasoning power, alertness, breadth and elevation of interest are among the other intellectual attainments which should accompany knowledge, grow out of it, and make it practically available, and these should all be secured thru the occupations of the school life.

Moreover much of the moral and social training essential to worthy living is the product of properly organized work. Indeed the occupations of people, both in school and the larger life, are largely responsible for their ideals. In a well-ordered life the moral and industrial elements are well-nigh indistinguishable. Life is one and what we do is almost of necessity in harmony with what we believe and what we aspire to.

Course of Study.

The occupations of the school are usually laid down with more or less definiteness in a *course of study.*

It is not my purpose at this point to treat the course of study in any detail. Such treatment will naturally come later in this series, if time and space allow. But it seems proper now to state a few principles underlying all good courses in order that the relations of occupation to school life in its entirety may appear and the unity of it all may be more manifest.

A course of study should be both mandatory and suggestive; mandatory as to broad plan and purpose, and suggestive as to details, methods, and material. It should be such as will stimulate intellectual activity and develop initiative in both teacher and pupils. It should recognize the differences in minds and the fact that to compel one mind to follow exactly the routine laid down by another is weakening, not strengthening. The great danger of organized education is the tendency to produce that similarity of product which indicates machine make. Hence the suggestiveness and the stimulating quality of a course of study are more important than even the mandatory general plan.

The latter, however, is necessary for the avoidance of vagueness and desultoriness of work. A course of study must require that certain results be accomplished at certain stages, and it must encourage and stimulate teachers to find the best way of accomplishing these *results.*

A fuller discussion of this matter will be given later in connection with the consideration of supervision.

A course of study must indicate a body of knowledge to be acquired and a range of activities to be engaged in. The former should be broad, so as to establish many points of contact with the world. The latter should be wide, so as to exercise and develop all the potentialities of nascent minds. The relations between the two should be very close.

The activities required should be upon objects evidently worth while, in the main those connected with the body of knowledge presented. There is a tendency among the makers of text-books, and among teachers as well, to devise work which exercises but a few of the natural activities of the mind, and to ding dong upon these with wearisome iteration, while pursuing that will o' the wisp of elementary education, thoroness. Drill for drill's sake is a positive fetich with many, especially in mathematics and the languages, including the mother tongue. Such drill is worse than waste. It deadens interest and defeats its own ends by limiting and, in some cases, actually arresting growth.

Every exercise should have an evident motive beyond itself. If the subject is reading, the golden end should be appreciation of the matter read; if language, the forceful and artistic expression of worthy thought, if mathematics, the comprehension of those wonderful relations of which mathematics is the mode of expression. These higher and remoter ends should be evident to the children. This ennobles drill and makes it seem worth while. It supplies the motive which alone makes drudgery possible to active minds.

Abundant drill in all departments can always be secured upon problems that are worth while. Life is full of such real problems even for children, and their mastery constitutes the truest education, it even furnishes the best drill. A boy making a boot blacking box in the manual training shop, doing his own computing, measuring, drawing, and fitting, is getting better mathematical drill within the range of his work than any mere memorizing and repetition of the words of a table of measurements can possibly give him.

This suggests another fundamental principle of a good course of study, a close observance of the natural relations among the various subjects studied and the various activities engaged in. In life nothing stands alone, all is related; so in the true school, which is a microcosm, an epitome of life.

The purpose of a course of study for elementary schools may be summarized as follows:

A course of study for elementary schools should supply the teachers with working material which they may employ in the training of the child. Its business is not to state in definite terms just what the teacher is to do each day, but rather to map out in a broad way those activities, exercises, and fields of knowledge which experience has shown to be most suitable for the elementary school, and to suggest to the teachers methods of enlarging this work and of preparing themselves to perform it. It should take into consideration such facts concerning children as the study of child life has made clear, the character of the civilization in which the child is to be a factor, and the means necessary to make him a most effective voluntary factor for good in his community. It must supply such activities as will best stimulate growth, such discipline as will produce the finest culture, and must suggest such knowledge as will enable him to take hold of nature effectively, comprehend what others have done and expressed, and to express himself adequately for the benefit of others. It must involve also such a vital acquaintance with social, economic, and ethical conditions as is required for perfect citizenship.

The principles outlined above for the occupations of the school-room being accepted, the teacher has a working basis for the organization of the school. The first business is to get the pupils at work in rational and educative employment adapted to their needs. If the school be one of a graded system the work for the different pupils will be similar, if not uniform ; there will be still need for the study of individual conditions, but the general plan will be pre-determined, and the material at hand.

If the school be a rural or ungraded one the task of initial organization will be much more difficult. There the work will be largely individual and the consideration of the needs of single pupils will force themselves at once upon the teacher's attention.

Here, too, it is especially difficult to preserve the social unity of the school community. Diversity of age, attainment, and work tend to undue accentuation of the individual and to unfortunate loss of social motive. While in the graded school the danger is that the individual shall be so merged in the social whole as to lose his distinct personal claim to attention and the recognition of his right to individual development. In the rural school common activities must be devised and encouraged and common interests aroused. In the graded school, individual activities, work for individual ends, must be planned, and the tastes, needs, and aptitudes of individual children must be noted and provided for. For in both, the end, social efficiency, must be kept in mind, and this requires the fullest development of individual power and the fullest comprehension of social relations and obligations. Each is necessary to the other. The individual is fully developed only in society, and society prospers only when its individual members are full-grown. Hence, the school, whether graded or ungraded, must be so organized as to properly balance the individual and social demands of true education.

The administration of the school must also see to it that both divisions of the course of study receive due attention—the body of knowledge and the range of activities. The process of education may be described as growth thru nutrition and exercise, or, as more commonly put, thru learning and expression. Hence these two kinds of effort must be duly provided for, not only in the course of study, but also in the administration of the school. Indeed, they cannot be separated. There is no learning without corresponding expression. Memorizing is not, necessarily, learning at all in the true sense. Unless the whole mind is employed there is no nutrition. Consequently, there is enormous waste in our educational processes. Where expression is ignored the learning is bogus ; it does not enter into the make-up of the mind. In such schools, only when the acquisition of the school is supplemented by the activities of the life out of school, is there true learning at all, and, as this supplementing is chance and unreliable, it is evident that much of the effort of the school-room is thrown away.

So the school must provide an abundance of activities which shall utilize and make vital, thru expression, the matter presented for learning.

The greatest lack of our schools to-day seems to me to be that of suitable provision for just this serious productive work by the pupils. Studying is still too largely mere committing to memory rather than such an application of the mind to vital problems as shall employ all its powers and produce real, as distinguished from verbal knowledge. Pupils in the average school do not do enough of real work. They spend hours enough, use up nervous energy enough, get tired enough, but they do not work enough. Provision must be made in the school for a sufficient amount of independent strength-producing work. This means that the school must be so organized that each pupil may have the opportunity and be compelled to work alone and unaided upon problems that bring into use all his energies, producing results that appeal to him as worth producing.

Let us consider first the graded school. As I have pointed out, one of the principal dangers of this school is that the child shall be swallowed up by the machine, that the social whole shall so absorb the individual that individual effort for individual ends shall be discouraged.

Another grave danger of the graded school is that the teacher shall do the work for the children. Where mass-teaching prevails the teacher is likely to be so anxious to push along the required work, to keep the class moving together, that the single child has no opportunity to labor with the feeling that he must, himself, work out his own salvation. The teacher is always there, ready to supply the deficiencies of the weak, himself supplementing the child's effort, that the beautiful uniformity of the class gradation may not be broken.

The most pernicious form of mass teaching is found in those schools in which the entire roomful of children do the same things at the same time—recite together, study together, with the teacher always present, helping, suggesting, telling. These schools represent the complete absorption of the individual. They do not stand for even good social training, which develops the individual as fully as possible for social efficiency, for social efficiency requires completely educated, self-directing individuals able to use all the strength of individuality for social ends.

Mass teaching so completely subordinates the individual that his efforts become mechanical. He cannot move alone; he moves with the mass. He is not self-directing; he has no power of initiative; he follows a leader, if there is one; if not, he follows the crowd.

The *Group System* of organization in large graded schools is almost necessary to this development of personal power. It is impossible and undesirable to have each pupil work altogether independently. That would be the other extreme. But it is both possible and desirable to have the school so organized into groups that both the social and the individual training necessary shall be secured.

The number of groups will depend, naturally, upon the size of the school, its grade, and the character of the work done. In primary grades there should be more groups than in the grammar grades. A primary grade of forty or fifty pupils should be divided into three or four groups. The grouping, to a considerable degree, should be according to ability to do the work. This facilitates frequent promotion and gives the individual a chance. The differences will be slight and children can be moved from one group to another, according to their particular needs, without causing undue elation or a sense of degradation.

More important still, it makes possible such work, both social and individual, as a right education requires.

These groups should be employed at different occupations. The teacher should be busy with one, in what is commonly called the recitation, an exercise in which the work done by the children while working alone is tested, instruction is given, suggestion offered, work outlined for the future, and, in general, that directive and inspirational work done which is the teacher's especial function.

This is the test period, which, perhaps, more than any other, shows to the teacher and to the children, themselves, the value and the meaning of the work of the school. It is the time for interchange of thought, for clarifying of ideas, for informing minds. But this recitation period can attain its highest effectiveness only when the other work has been skilfully directed and well done.

A group as small as ten or fifteen can be in very close relations with the teacher during the recitation period. Each individual child can receive considerable attention and can become really known by the teacher. A teacher with forty-five pupils, can, in forty-five minutes, do very much more for each child if she spends fifteen minutes with each of three groups than if she has them all for forty five minutes together, and, besides this, each child can have had thirty minutes of steady individual work, undisturbed by the iteration of the teacher.

The groups not engaged in recitation should be at work by themselves. This work should, of course, be planned and directed by the teacher, but she should, while they are busy upon it, be absent from their mind, as completely as possible. They should be absorbed in the work.

With the lower primary grades this work should be largely that which brings into play motor activities, some form of expression work—writing, or drawing, or painting, or modeling in sand or clay, construction, blackboard work—some form of activity in which the children develop and express ideas connected with and suggested by the course of study and the recitation work of the day. The changes should be of sufficient frequency to avoid undue fatigue and the problems should be "real" and *educative.* This occupation should not be play, but serious work, tending toward the end of the school, *growth thru nutrition and expression.*

Children so organized and directed will work with genuine joy and earnestness, realizing that they are accomplishing something worth while. Such an arrangement solves the question of the so-called "discipline" of the school, but I will speak of that later.

A roomful of children thus occupied, one group eagerly busy with the teacher in the recitation, while the others are working by themselves—one at a blackboard solving problems in arithmetic, another at their desks writing a language exercise, or standing about a large table painting, or, perhaps, gathered about a "sand table" working out together with the sand and cardboard and other constructive material, the story of the Trojan war, all eager and absorbed in the work in hand, while the teacher, gently and almost unobserved, guides it all—such a school forms a beautiful and inspiring spectacle. And the best of it is, children so engaged are receiving real education. They are exercising their minds independently and yet in society. They are gaining strength and the power of self-direction thru self-direction. They are developing thought and are expressing it, thus making the facts they learn nutritive.

In higher grades two groups are enough. The pupils here are capable of longer continued exertion. There is, necessarily and properly, more conning of books.

There is less need of frequent motor activity. There is more of what we commonly call study, and this can be continued for longer periods of time. Nor is there quite the same need for the close, individual attention possible in the smaller groups.

In grammar grades of forty pupils, two classes of twenty each with half-hour recitation periods produce excellent results. There is here abundant opportunity for unaided study, a prerequisite of mental strength, and there is time in plenty for recitation purposes.

Naturally, many of the exercises of the school-room are better carried on by the whole school together. Such are music, formal drawing lessons—all exercises in which all pupils necessarily take part during the whole time. Such general exercises are valuable, also, for social training and should on no account be neglected. But most of the school work can be more successfully carried on in groups. In particular this system makes possible that unaided, individual work, which is absolutely necessary for the development of power.

I am not unaware of several systems advocated with much force for individual training in graded schools. Most of them have points of excellence which teachers will do well to avail themselves of, but they all need to be studied with great care before adoption. Any prescription of the character of a nostrum is likely to be one-sided and to omit some essential. One of those systems, much advertised, seems to overlook entirely the need for social training, another appears to ignore the importance of unaided work by the pupil for the development of strength. They most of them seem to consider getting along, going thru the grades, the important thing in school rather than education itself, which may have little to do with gradation.

Such an arrangement necessitates careful preparation on the part of the teacher; it requires organization to prevent waste. Material for the work of the different groups must be at hand. Plans for its distribution at the proper times must be made. The teacher must be alert and ready. But the care is compensated for in the interest produced, the self-direction developed, and the superior order resulting.

The Ungraded School.

In the ungraded school a different sort of organization is required. Combination, rather than separation, is needed here. Children should be grouped upon such common problems as are possible. They may be problems of nature study, for which abundant material is at hand. They may be problems of construction, the making of simple pieces of apparatus for the use of the school, or the maintaining of school gardens for the study of simple agricultural or horticultural questions. Or the common work may be the making and solving of arithmetical problems relating to the school or the community life, such as measurements and computations for the construction of buildings for rural use, or the laying out of land for gardens or farms. It may be the study of geography or history or literature, to which each child contributes what he has been able to secure thru his personal investigation or research.

In the ungraded school especial care should be taken with the general exercises in which the whole school is engaged—singing, drawing, debates, spelling-matches, special oratorical and declamatory exercises of various kinds. The children should be led to do, co-operatively, as many things as possible, each contributing his share.

Much use may properly be made, in all schools, of special days, for social training—such days as the birthdays of authors and statesmen and other prominent persons. The decoration of school-room and school-grounds, too, offers fine opportunities for community work of an altruistic sort. Children should be led to see that social betterment comes thru the combined efforts of many, each contributing his share. I cannot refrain from repeating, education *is to develop social efficiency in individuals, and this comes thru developing individual power by means of work in co-operation.*

In the next article I hope to treat of the morale of the *school and to show its* relation to the school occupations.

QUESTIONS.

1. What is the chief problem of school administration?

2. Dr. Gilbert calls the school "A spiritual community;" explain the meaning of this.

3. What are the principal unifying agencies of the school community?

4. Discuss the effects of marks, prizes, and other "secondary ends" in school life. (Explain.)

5. What factors determine the character of a school?

6. How would you judge the value of a school?

7. What part should be assigned to knowledge in fixing the purpose of a school? Give reasons.

8. What considerations should govern the construction of a course of study?

9. What are the purposes of a course of study? Its limitations?

10. What are some of the evil effects of "drill for drill's sake"?

11. Dr. Gilbert says, "Every school exercise should have an evident motive beyond itself." Explain and illustrate by an example.

12. What principles to be observed in outlining a course of study are to be deduced from the statement, "The true school is a microcosm, an epitome of life"?

13. Outline what you consider an adequate working basis for the organization of a school.

14. What are the principal differences between a one-room (multi-graded) rural school and a graded school?

15. What are the essential conditions for the preservation of social unity of the school community?

16. What difficulties are inherent in the "graded" system? How may they be modified?

17. What is Supt. C. B. Gilbert's definition of the process of education? Discuss it?

18. What are the principal causes of waste in school education?

19. Discuss the importance of self-expression in education.

20. What do you consider the chief common defect of the schools you are acquainted with? How may it be overcome?

21. Altho pupils are generally "overworked" at school, they do not do enough real work. Explain this assertion and illustrate.

22. How can the school encourage independent effort? (State general principles and illustrate each by examples from school-room practice.)

23. What are the most pernicious forms of mass teaching?

24. What is meant by the "group" system of school organization? What are its advantages?

25. How is the development of the individual made possible in a graded school?

26. Describe the practical workings of the "group" system (a) in a primary class-room; (b) in a more advanced class.

27. What should be the principal activities in a a primary school program?

28. What special demands does the group system make upon the teacher?

29. What opportunities for developing "community work of an altruistic sort" are within the scope of every ordinary elementary school?

30. How would you organize a so-called ungraded [multi-graded] school for effective work?

Child Study and School Hygiene.

A Child-Study Record.

DR. THEO. B. NOSS, principal of the state normal school at California, Pa., has prepared for the use of his students in pedagogy a child-study record that will prove helpful to teachers generally. The plan followed by Dr. Noss in his classes is that each student selects some child (between 3 and 8 years old) for special study, observing closely, studying patiently, and recording truthfully. Care and tact, and especially a loving and sympathetic heart, are the principal qualifications required to make a succes of records of this nature. It would be preposterous, of course, to expect teachers to make as comprehensive a study of every pupil, but the outlines here given will suggest points to watch out for and note down when gathering data needed for forming correct estimates of individual children.

It will be greatly to the advantage of a teacher to select each year at least two pupils for special study and secure faithful and comprehensive records of their individualities. Begin with pencil jottings in a book kept for the purpose, later enter in the record blanks. Dr. Noss suggests these data :

CHILD STUDIED.

1. Name..
2. Age...................................
3. Name of father......................Nationality.................
4. Name of mother....................Nationality................
5. Occupation of father..
6. Residence...
7. Are parents living ?...
8. Any facts concerning parents likely to affect the development of the child...

I. PHYSICAL LIFE.

1. General facts :

a Complexion ?.................Color of hair ?................
Of eyes ?..................Is expression bright and pleasing or

the opposite ?..
b Health, perfect, medium, or poor ?..........................
If poor, any known cause ?...
Much headache, earache, toothache, &c. ?.......................
What diseases has he had ?...
Any effects remaining ?..
Is clothing suitable and sufficient ?...............................
2. Measurements.
a Height.........feet.........inches. *b* Weight......pounds.
3. Facts as to sight. [Test each eye separately with Test Cards,[*] such as Snellen's.]
a Right eye, vision perfect or defective ?................If defective, to what extent ?
b Left eye, ditto...
c Any straining to see ?............Where has child been seated in school-room ?...Where should he be seated ?...
4. Facts as to hearing. [Test each ear separately with the ticking of a watch, or whispered voice.]
a Right ear, hearing perfect or defective ?................ If defective, to what extent ?...
b Left ear, ditto...
5. Hygienic habits, etc. [Get from parents or others data as exact as possible.]
a Sleep. How many hours of the 24 ?.............Is there a regular bed time ?............If so, what is it ?.................
Is sleep usually sound or broken ?..............................
b Eating. Does he eat heartily, moderately or sparingly ?.............................Does he eat frequently between regular meals ?.....................If so, what ? ....
What kinds of food does he eat chiefly ?.......................
What kinds does he crave most ?................................
Is any coffee allowed ?...........If so, how much ?...........
Tea ditto..
Which is the heartiest meal of the day ?.......................
Is breakfast a hearty or light meal ?...........................
Is it often omitted altogether ?...................................
c Work. What work, if any, is regularly required ?...... ....Too much or not ?..............................
Is it done willingly, or unwillingly ?............................
Is he soon fatigued ?...

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[*] Cost but a few cents. Write to Jas. W. Queen & Co., Philadelphia, Pa., or any optician.

Right or left handed ?...

d Play. Is there much eagerness to play ?................ Does he like to play alone ?...................... What kinds of play preferred ?............................. If there is work to be done, does he prefer work first, and then play or *vice versa ?*

e Breathing. Does he breathe thru the nose (a good sign both physically and mentally) or thru the mouth ?.........

f General Movements. (a) Quick and lively, or slow and languid ?..

Are shoulders carried erect or stooping ?............Is chest prominent ?.............................(b) Movements graceful or the opposite ?.......................................(c) In standing or walking does the position of head, chest, hands, or feet denote strength or weakness ? If so, how ?..........................

g Personal appearance ?..........................Dress neat and clean, or the opposite ?......................Reason ?..Face and hands usually clean ?............... Hair teeth, ears, and nails cared for, or neglected ?........... Any deformities ?..Any peculiar habits ?...

h Any bad habits, such as biting nails, sucking fingers, stammering, twitching muscles of face etc.?......................

i Impulsive ?.........................Nervous ?.................. Can he sit perfectly still one minute ?........................Have him thread a needle and observe how he does it.................

II. MENTAL LIFE.

Mental development, in general : Unusually advanced....... Medium............................. ......Backward........ ....

1. Attention.

a Usually attentive in, (a) a marked degree, (b) a moderate degree, or (c) a slight degree ?.....................Can you assign a cause ?..

b To what things most attentive ?......................... Least ?...Any cause apparent ?

2. Sense. Perception

a What colors, tints, and shades can he distinguish and name ?.. .... Which is his favorite color ?....................His favorite combination of two colors ?...

b Is there a good perception of tones ?...................... Can he sing ?....................Can he sing the scale after you ?...... ....

3. Memory.

a In general, good or poor ?....................................

b What objects or events are best remembered ?...........

c Of the things studied in school, which seems hardest to remember ?..

Any apparent reason ?..

d Which are most easily remembered, and why ?.........
....

4. Imagination.

a In general, very active, medium or dull ?................

b Fond of stories and story books ?...............If so, of what kind ? Give examples..

c Name some acts or ways in which the imagination shows itself. For example, where is the sun at night ?........
..........................The moon in daytime ?........................
..............................What is the sky ?...........................

d Has he any heroes ?..............If so, who are they, for example?..

e What particular ambitions has he, if any ?..............

f Any well marked tendencies to imitate others ?......
Examples...

g How is he most easily influenced ?.......................

7. Fears.

a Has he any groundless or superstitious fears, such as of the dark, of thunder, of "spooks," of the dead, of giants, of a "man under the bed," &c. ?..................If so, name them, and explain their origin, if you can..................

b Has he sufficient fear of things that are really dangerous, as railway trains, cross animals, &c...........................

8. Anger.

a Is he subject to fits of anger ?.............................

b Does he get angry easily, i. e. with slight cause ?......
....

c How does he show anger (e. g. by sulking, exclamations, slamming doors, &c)...

d Does he recover quickly from anger fully forgiving and forgetting, or cherish ill-will long ?.........................

9. If child is in school, is his time occupied

"*a* In doing, or talking ?........... ....

b In thinking, or memorizing ?...............................

c In creating, or in copying ?.................................

d In freely expressing himself, or in being kept in order ?...... ....

III. MORAL LIFE.

1. Has he definite notions of Right and Wrong in others? in himself? Give some examples..................................

2. Specify some distinctively moral habits, good or bad, already formed? If so, state how, in your opinion, they were acquired..

3. Attitude towards Parents and Teachers. Is obedience always prompt and cheerful, or sometimes hesitating? Ever flatly disobedient? Cause, in your opinion?....................

4. As to truthfulness.

Does he ever tell lies?..................If so, of what kinds, for example?..

What is the motive usually in telling these "stories"?......

....

Is he conscious that this is wrong?.............................

5. Actions towards Playmates.

Is he kind or unkind?....................Selfish or generous?...

.........................Sympathetic or cruel?..........................

6. Actions toward Animals.

Pitiful or cruel?.............................Any special likes or dislikes?...

7. How much specific religious training has already been acquired? Where acquired?........ ....

Child study is thought to be something for the psychologist only. But there is a practical study of children that should be pursued in the home and in the school. This study is not only the privilege, but one of the most sacred duties imposed by society upon all its citizens.

Teachers should seek to ally themselves with various citizens' organizations where child study questions may come in for a part of the discussions. There are many questions of vital interest to teacher and layman, *e. g.*, compulsory education laws, child labor laws, the cigaret evil, curfew laws, repulsive advertising cuts, and advertisements of fraudulent schemes and quack nostrums in the newspapers; children's reading and amusements, boys' clubs, influence of companions, influence of public library, better school facilities, etc. Such subjects should not only be discussed, but attempts should be made to remedy evils. What the people want, to establish faith in child study, is remedy, not diagnosis *alone.*—FREDERICK E. BOLTON, University of Iowa.

Child Study Plans of the Philanthropinists.

Basedow is probably the first educational leader to attempt a systematic study of pupils and record the results of the observations. The teachers in his famous school at Dessau were required to make comprehensive studies of their pupils. To parents he suggests the keeping of a book in white and a book in black covers for each child, entering the observed good qualities and actions in the former and the particularly evil doings in the latter. Basedow's plan was widely copied. Thus at Bahrdt's Philanthropin which was closely modeled after the Dessau institution, the teachers were placed under the following rule:

"Every teacher must choose several pupils with whom to enter into intimate companionship, to win their hearts, study their minds, and cultivate their souls with the zeal of a true friend. Every teacher must keep a record in which to note down whatever he may observe in these children whether it be good or evil. This record must be submitted each month to the curator for inspection. Everything recorded during the hours of instruction or in playtime shall be presented to the school senate."

The "senate" consisted of teachers and pupils and was a court of discipline. It met every Wednesday to determine the prizes to be awarded for virtue, and to make known and act upon the mistakes and evil doings of pupils. Here is one of the verdicts rendered:

"A. has been declared over-sensitive by unanimous vote; he has reason, according to the judgment of thirty senators to break himself of the childishness and silliness in his conduct; it is also the wish of all senators that he wash himself more frequently and keep away from filth and nastiness."

Here are three verdicts which reveal much care in the observation of pupils:

"D. is diligent and orderly, but he depends too much upon his natural gifts and forgets that these are no real merits. As a result he is not very careful at his tasks and is inclined to be vain and puffed up. All who love him desire him to be more watchful over his heart that he may convince himself that the most brilliant qualities of the intellect without a good and pure heart will not permanently assure him the respect of men nor can they satisfy him and make him contented.

"J. is praised by all for his industry. But his temper is still too uneven. As a result his character has the appearance of deceitfulness when he is in bad humor. He ought to be very watchful over himself in his hours of moodishness.

"S. is good and diligent. He has shown great improvement as regards appearance of vanity and false pride. But he is still headstrong, *i. e.*, he is still at times a slave of his humor, who has no power over himself but is controlled wholly by his mood."

These sketches illustrate the plan followed in the schools influenced by the founder of Philanthropinism, Basedow, the greatest school man of the eighteenth century.

QUESTIONS.

1. Give an outline of the beginnings of a systematic study of children at school.
2. Who were the Philanthropinists? What were the chief articles of their educational creed?
3. Describe the child study plan followed by Basedow's disciples.
4. Who was Basedow?

The above description of the child study plan inaugurated by Basedow and adopted by his followers might with equal propriety have been given a place in the department of educational history. A sketch of Basedow and an estimate of his importance in the development of modern school education will appear in the January number. Those who desire a brief summary of his life and educational ideas now may find what they want in one the Kellogg "Teachers Manuals" on Basedow. The ordinary manuals on the general history of education do not, as a rule, treat the Philanthropinists fairly.

Children's Lies.

By G. STANLEY HALL.

FOUR tactful teachers from Mrs. Pauline A. Shaw's kindergartens in Boston examined 300 children of both sexes, between twelve and fourteen, privately, by a carefully devised method which avoided all indelicacy to the childish conscience. The returns are divided into seven distinct species of lies, each is reported on with detail:

I. PSEUDOPHOBIA.

Where every deviation from painfully literal truth is alike heinous, where, "I think" or "perhaps" is silently interpolated, or "not" is said over hundreds of times to neutralize the guilt of intended and unintended falsehoods. Some even feared instant death, like Ananias, for even an unconscious misstatement, systematized palliatives, casuistic word-splitting, was the result.

II. THE LIE HEROIC

Which is justified as a means to noble ends. Here belongs false confessions where strong children assume penalties of weaker ones. Children have a wholesome instinct for viewing moral situations as wholes, but yet are not insensitive to that eager and sometimes tragic interest which has always for all men invested those situations, in both life and in literature, where duties seem to conflict. The normal child feels the heroism of the unaccountable instinct of self-sacrifice far earlier and more keenly than it can appreciate the sublimity of truth. Theoretic or imagined cases of this kind were often volunteered by the children with many variations. They declare, *e. g.*, that they would say that their mother was out when she was in, if it would save her life, giving quite a scenic setting to such a possible occurrence, adding infrequently that this would not make it *exactly* right, tho it would be their duty to do it, or that they would not tell a like lie to save their own lives. A doctor, too, many suggested, might tell an over-anxious patient or dearest friend that there was hope, easing his own conscience, perhaps, by reflecting that they had some thought he had none. In confronting such cases, it is the conscientious parent or teacher who is most liable to get nervous and err. It is feared that altho the end is very noble and the fib or quibble very petty at first, worse lies for meaner objects may follow. The fondness and even sense of exhilaration, with which children describe such situations, is often due to a feeling of easement from a rather tedious sense of the obligation of undiscriminating, universal, and rigorously literal veracity, under which also very often lurks an effort to find the flavor of exculpation for more inexcusable lies.

The child who gets really interested in what it deems the conflict of veracity with other duties, may be reverently referred to the inner light of its own conscience. This seems to be a special opportunity of nature for teaching the need of keeping a private protestant tribunal where personal moral convictions preside, and which alone enables men to adapt themselves to new ethical situations.

III. TRUTH FOR FRIENDS AND LIES FOR ENEMIES.

With most children, as with savages, truthfulness is greatly affected by personal likes and dislikes. In many cases they could hardly be brought to see wrong in lies a parent or some kind friend had wished them to tell. Often suspected lies were long persisted in till they were asked if they would have said that to their mothers, when they at once weakened. Boys keep up joint or complotted lies which girls rarely do, who "tell on" others because they are "sure to be found out," or "some one else will tell," while boys can be more readily brought to confess small thefts, and are surer to own up, if caught, than girls. All children find it harder to cheat in their lessons with a teacher they like. Friendships are cemented by frank confidences and secrets and promises not to tell. To simulate or dissimulate to the priest or, above all, to God, was repeatedly referred to as worst of all. On the other hand, with waning attachment, promises not to tell weaken in their validity. It has taken mankind long enough to learn the sublimity of a kind of truthfulness which is no respecter of persons.

The best correction of this general tendency of children, we believe to be instruction in science, the moral needs and uses of which alone call loudly for more of it and better. But the teachers of younger children should look well to their friendships, and study especially, the character of leaders and favorites.

IV. SELFISHNESS.

Every game, especially every exciting one, has its own temptation to cheat; and long records of miscounts in tallies, moving balls in croquet, crying out "no play" or "no fair" at critical moments to divert impending defeat, false claims made to umpires, and scores of others show how unscrupulous the all-constraining passion to excel often renders even young children. Lies of this kind, prompted by excitement, are so easily forgotten when the excitement is over that they rarely rankle, and are hard to get at, but they make boys unscrupulous and grasping. School life is responsible for very many, if not most of the deliberate lies of this class. Few will not give, and not many will not take prompts or peep in their books, especially if in danger of being dropped or failing of promotion. There was a long list of headaches, nosebleeds, stomach-aches, etc., feigned to get out of school or avoid going to it, of false excuses for absence and tardiness, the teacher, especially if disliked, being so often exceptionally fair game for all the arts of deception; all this seems generally prevalent. This class of lies ease children over so many hard places in life and are convenient covers for weakness and even vice. The facility with which a whole street or school may be corrupted in this respect, often without suspicion on the part of adults, by a single bold, bad, but popular child; the immunity from detection which school offers so much more than home for even habitual lies of this class, as well as the degree of moral degradation to which they may lead, all point to selfish falsehoods —especially when their prevalence is taken into account—as on the whole the most dangerous, corrupting, and hard to correct of any of our species.

Excessive emulations, penalties, opportunities, and temptations should of course be reduced, but it should be clearly seen that all these lies are at bottom, forms of self-indulgence, and should, in the great majority of cases, be treated as such, rather than dealt with directly as lies. The bad habits they cover should be patiently sought out and corrected, for those who habitually do ill are sure to learn to lie to conceal it. The sense of meanness this slowly breeds must be met by appeals to honor, self respect, self-control. Hard and even hated tasks, and rugged moral, mental, and physical regimen should supplement those modern methods which make education a sort of self-indulgence of natural interests.

V. IMAGINATION AND PLAY.

Much childish play owes its charm to partial self-deception. Children imagine or make believe they are animals, soldiers, hunters in extreme peril from wild beasts, Indians, artisans, and tradesmen of many kinds, doctors, preachers, angels, ogres. They play school, court, meeting, congress. If hit with wooden daggers in the game of war they stand aside and play they are dead. If they step on a crack in walking the floor or sidewalk, they call it they are poisoned. Protruding spots of earth or land in pools or ponds, or at half-tide in the bay, suggest the geography of a continent, and in one case, for years, Boston, Providence, West Indies, Gibraltar, Brooklyn bridge were thus designated by all the children of a large school in their plays. In another, a dozen hills, valleys, rills near by were named from fancied resemblance to the familiar mountains, rivers, and valleys of the geography. The play-house sometimes is so real as to have spools for barrels of flour, pounded rotten wood for sugar, pumpkin chairs, cucumber cows, moss carpets, sticks for doors which must be kept shut, twig brooms, pet animals for stock with pastures and yards, all the domestic industries in pantomime, toad-stools, lichens, and puff-balls for bric-a-brac, while some older boy and girl may play parents with secret pet names, and younger ones as children, often for a whole term and in rare instances for years; all of this, of course, being almost always in the country. They baptize cats, bury dolls, have puppet shows with so many pins admission, all with elaborate details They dress up and mimic other, often older people, ride on the horse cars and imagine them fine carriages, get up doll hospitals, and play surgeon or Florence Nightingale. The more severe the discipline of the play-teacher and the more savage the play-mother the better the fun.

One phase of this is exquisitely illustrated in the life of Hartley Coleridge, by his brother. His many conceptions of his own ego—*e. g.*, by the picture Hartley, shadow Hartley, echo Hartley, etc.; his fancy that a cataract of what he named jug-force would burst out in a certain field, and flow between populous banks where an ideal government, long wars, and even a reformed spelling illustrated in a journal devoted to the affairs of this realm, were all developed in his imagination where they existed with great reality for years; his stories to his mother continued for weeks; his reproduction of all he had seen in London, its theater, laboratory, and what he had read of wars, geographical divisions, in a large playground appropriated to his use,—these all illustrate this normal tendency, but in a degree of intensity, probably morbid, much resembling the pseudo-hallucinations of Kandinsky.

Two sisters used to say, "Let us play we are sisters," thus making the relation more real. Cagliostro found adolescent boys particularly apt for his training to subserve the exhibition of the phrenological impostures illustrating his thirty-five faculties. He lied when he confessed he had lied, said a young Sancho Panza who had believed the wild tales of another boy who later confessed their falsity. Sir James Mackintosh in youth after reading Roman history used to fancy himself the emperor of Constantinople, and carry on the administration of the realm, hours at a time, and often resumed for months. These fancies of his never amounted to conviction, but doubtless excited a faint expectation which, had they been realized, would have lessened his wonder. Charlotte Elizabeth lived largely in an imaginary realm for years in her youth.

In some games like "crazy mother," younger children are commanded, or older ones stumped or dared, to do dangerous things, like walking a picket fence or a high roof, etc., in which the spirit of play overcomes great natural timidity, and by playing school with other mates, or perhaps parents, they are helped by the play instinct to do hard examples and other hated tasks they had scarcely accomplished in actual schools. The stimulus and charm of the imagination makes them act a part different from their natural selves; some games need darkness to help out the fancy.

It seems almost the rule that imaginative children are more likely to be dull in school work, and that those who excel in it are more likely to have fewer or less vivid mental images of their own.

One early manifestation of the shadowy falsity to fact of the idealizing temperament is often seen in children of three or four, who suddenly assert that they saw a pig with five ears, a dog as big as a horse, apples on a cherry tree, and other Munchausen wonders, which really means at first but little more than that they have that thought or have made that mental combination independently of experience. They come to love to tell semiplausible stories, and perhaps when the astonishment is over to confess. Or, again, all stories of men and things they hear are given a setting in the natural scenery or, far less often, in the houses they know best, and their friends are cast in the roles.

The fancy of some children is almost visualization, and a few will tell at once, *e. g.*, what was the color of Barbara Frietchie's dress, whether she wore glasses and a cap, just where in their father's sheep-pasture the goblin in the Arabian Nights rose out of the bottle, if pictures of these objects have not obviated the normal action of this faculty. Revery which materializes all wishes, and the mythopœic faculty which still occasionally creates a genuine myth among children, boys who amuse their mates with long and often clever yarns of their own invention, girls who make up ridiculous things about others—to all these the school has paid little attention, and Mr. Gradgrind would war upon them all as inimical to scientific veracity.

We might almost say of children at least, somewhat as Froschamer argues of mental activity, and even of the universe itself, that all their life is imagination. Such exercise of their faculties children must have even in the most platonic school republic. Its control and not its elimination is what is to be sought in the high interest of truthfulness.

The progressive degeneration of the school reader, and the simultaneous development of flash literature for the young, has had much to do with the growth of evil tendencies in this field. To direct and utilize, so far as it needs it, this manifestation of the play instinct which, tho sporting with lies so gracious and innocent, may lead to so many kinds of divorce of thought from reality and of self-deception, the whole question of how best to introduce the young to the best literature of the world, each kind and grade in fit time and proportion must, we believe, be pondered. How much of this can best be appreciated in children, only those know who have realized in their own experience and observation how youthful minds find and play about the chief beauties of ballads, of Homer properly told in English, and of the story books and great situations in the choicest English writers, if only put in proper form. Psychologically imaginative literature is a direct development from this variety of play, and into this its unfoldment is natural.

VI. PSEUDOMANIA.

The worst type of lies which may be called pathological are rare among children and are illustrated by passionate love of showing off, and false pretenses, assuming new characters or going to a new place. A few children, especially girls, are honey-combed with morbid self consciousness and affectation, and seem to have no natural character of their own, but to be always acting a part and attracting attention. Boys prefer fooling and humbugging by tricks or lies, sometimes of almost preternatural acuteness and cleverness. This is the normal diathesis which develops girls into hysterical invalids, deceiving sometimes themselves and sometimes their relatives most, on whom faithcurers work genuine miracles, and which makes boys into charlatans and impostors of many kinds. The recent literature of both telepathy and hypnotism furnish many striking examples of this type. Accessory motives, love of applause, money, etc., are at first involved, but later what we may designate as a veritable pseudomania supervenes where lies for others, and even self-deception are an appetite indulged directly against every motive of prudence and interest. As man cannot be false to others if true to self, so he cannot experience the dangerous exhilaration of deceiving others without being, in a measure, his own victim, left to believe his own lie. Those who have failed in many legitimate endeavors learn that they can make themselves of much account in the world by adroit lying.

These cases demand the most prompt and drastic treatment. If the withdrawal of attention and sympathy, and belief in the earlier manifestations, and if instruction and stern reprimand are not enough, there is still virtue in the rod, which should not be spared and, if this fail, then the doctor should be called.

Finally, children have many palliatives for lies that wound the conscience. If one says "really" or "truly," especially if repeated, and most solemnly of all, "I wish to drop down dead this minute, if it is not so," the validity of any statement is greatly reduplicated. Only a child who is very hardened in falsehood, very fearful of consequences, or else truthful, will reiterate "it is so anyhow," even to tears in the face of evidence he cannot rebut, while others will confess or simulate a false confession as the easiest issue. Only young children who mistake for truth whatever pleases their elders or occasionally those too much commended for so doing, and find pleasure in confessing what they never did.

To say yes, and add in whisper, "in my mind," meant no, among the children of several schools at least in one large city. To put the left hand on the right shoulder also has power, many think, to reverse a lie, and even an oath may be neutralized or taken in an opposite sense by raising the left instead of the right hand. To think "I do not mean it," or to mean it in a different sense, sometimes excruciatingly different from what is currently understood was a form of mental reservation repeatedly found. If one tries not to hear when called, he may say he did not hear, with less guilt.

An acted lie is far less frequently felt than a spoken one, so to nod is less sinful than to say yes; to point the wrong way when asked where some one is gone, is less guilty than to say wrongly. Pantomimed lies are, in short, for the most part, easily gotten away with. It is very common for children to deny in the strongest and most solemn way wrongs they are accused of, and when, at length, evidence is overwhelming, to explain or to think, "My hand or foot did it, not I." This distinction is not unnatural in children whose teachers or parents so often snap or whip the particular member which has committed the offence.

In fine, some forms of the habit of lying are so prevalent among young children that all illustrations of it, like the above, seem trite and commonplace. Thoro-going truthfulness comes hard and late, and school life is now so full of temptation to falsehood that an honest child is its rarest, as well as its noblest, work. The chief practical point is for the teacher to distinguish the different forms of the disease and apply the remedies best for each. So far from being a simple perversity, it is so exceedingly complex and born of such diverse and even opposite tendencies, that a course of treatment that would cure one form would sometimes directly aggravate another. If we pass from the shallowness of Mrs. Opie to the deeper, but often misconceived one of Heinroth, and strive to realize the sense in which all sin and all disease are lies, because perversions of the intent of nature, we shall see how habitual falsehood may end, and in what in a broad sense it begins.

A robust truth-speaking is the best pedagogic preparation for active life, which holds men up to the top of their moral condition above the false beliefs, false fears, and false shames, hopes, loves we are prone to. The effort to act a part or fill a place in life for which nature has not made us, whether it be school-bred or instinctively fascinating to intoxication as it is for feeble, characterless, psychophysic constitutions, is one of the chief sources of waste of moral energy in modern society. Lies, acted, spoken, imagined, give that morbid self-consciousness so titileting to neurotic constitutions.

The habitual gratification of all a child's wishes indirectly cultivates mendacity, for truth requires a robust and hardy self-sacrifice, which luxury makes impossible. Much society of strangers where "first impressions" are consciously made, favors it. Frequent change of environment, or of school or residence, favors it, for a feeling that "new leaves" can be easily turned arises. Frequent novelties, even of studies, probably cultivate one of its most incurable forms, viz., that state of nerves where the first impression is streng and vivid and pleasurable, while repetitions are indifferent, if not soon positively painful; a condition which, but for multiplying the already large number of mild manias, might be called *neomania*.

Children should be shielded from both the professional mendacity and the false exaggeration of the abnormal of many modern newspapers, and held to long and firm responsibility for their acts and words. When men or civilization, yet capable of it, give up the lie and fall back to their best and truest selves, to be and to be accepted for what they really are by nature and heredity, one of the highest and most intense of all pleasures is realized, which tho narrowed and conventionalized by many religious and dogmatic systems, is very manifold and may appear as general moral reformation, new intellectual insights, emotional easement and satisfaction, greater energy in action, and perhaps even greater physical betterment in certain forms of disease in certain temperaments and, in a word, is still, from the standpoint of scientific psychology, not unworthy the grand, old, but greatly abused term regeneration.

—From *Pedagogical Seminary*, Vol. I.

Contagious Diseases.

The following rules of guidance are suggested by the Massachusetts State board of health:

"A certificate of vaccination to be required of every child entering the public schools.

"Physicians to be required, under penalties, to report to local boards of health all cases of dangerous infectious diseases observed by them; the board to inform principals of schools.

"The existence of any case of such diseases in a house to exclude the inmates from attendance at schools for a sufficient length of time, the propriety of re-admission being certified to by a competent physician.

"Disinfection of premises and clothing by the board of health in every house where the above diseases have prevailed.

"Medical authority to be designated, for the purpose of advising teachers and pupils, and pointing out to the school committee matters in regard to which their authority might be used to improve the sanitary condition of schools."

History of Education.

Father Pestalozzi at Stanz.

Adapted from a rare copy of Biber's "Life of Pestalozzi."

Never was the power of mutual love and sympathy between master and scholars more strikingly or beautifully displayed than in the asylum of Pestalozzi in Stanz, in the Helvetic canton of Unterwalden. His school there was founded by the Helvetic government and maintained at the public expense, but he commenced it under circumstances the most disadvantageous and discouraging that can well be imagined. Some idea may be formed of the materials on which he had to operate from the statement of a few facts. Some parents asked to be paid for leaving their children in the school, to compensate for the diminished produce of their beggary. Others desired to make a regular bargain for how many days in the week they should have a right to take them out to beg, and, on this being refused, actually removed them from the institution. Upon Sundays the fathers, mothers, brothers, sisters, aunts, cousins, and other relations of various degrees, made their appearance, and, taking the children apart in some corner of the house or in the street, elicited complaints of every kind, and then either took them away or left them discontented and peevish. The parents did not even affect to support him, but, on the contrary, treated him as a mean hireling, who, if he had been able to make a living in any other way, would never have undertaken the charge of their children.

In this unfavorable and disheartening position Pestalozzi saw himself stripped of all the ordinary props of authority and, in a manner, compelled to rely on the power of love in the child's heart as the only, or almost the only, source of obedience. The adoption of any of those crafty systems of rewards and punishments, by which the external subduing of every foul and unclean spirit had been elsewhere accomplished, was, under the circumstances, entirely out of the question, even if Pestalozzi had been capable of making himself head policeman in his school. The only means, therefore, by which it was possible for him to gain any ascendancy over his pupils was an all-forbearing kindness.

He felt himself unable, it is true, entirely to dispense with coercive measures, or even with corporal chastisement, but his inflictions were not those of a pedantic de pot, but of a loving and sympathizing father, who was as much, if not more than the child himself, distressed by the necessity of having recourse to such measures. Accordingly, they produced not upon the children that hardening effect which punishment too frequently has, and one fact, particularly, is recorded of his experience at Stanz, in which the result seemed to justify his proceedings. One of the children who had gained most upon his affections ventured, in the hope of indulgence, to utter threats against a school-fellow and was severely chastised. The poor boy was quite disconsolate and having continued weeping for a considerable time took the first opportunity of Peztalozzi's leaving the room to ask forgiveness of the child whom he had offended and to thank him for having laid the complaint, of which his own punishment was the immediate consequence.

The gentleness, forbearance, and unaffected kindness and sympathy of Pestalozzi soon made his school at Stanz a very different thing from what it had been at first. In the midst of his children he forgot that there was any world besides his asylum, and, as their circle was a universe to him, so he was all in all to them. From morning to night he was the center of their existence. To him they owed every comfort and every enjoyment, and, whatever hardships they had to endure, he was their fellow-sufferer. He partook of their meals and slept among them. In the evening he prayed with them before they went to bed and, from his conversation, they dropped into the arms of slumber. At the first dawn of light it was his voice that called them to the light of the rising sun and to the praise of their Heavenly Father. All day he stood amongst them, teaching the ignorant and assisting the helpless, encouraging the weak, and admonishing the transgressor. His hand was daily with them, joined in theirs. He fulfilled the Scripture maxim of weeping when they wept and rejoicing when they rejoiced. He was to them a father and they were to him as children.

Such love could not fail to win their hearts; the most savage and the most obstinate could not resist its soothing influence. Discontent and peevishness ceased and a number of between seventy and eighty children, whose dispositions had been far from kind and their habits anything but domestic, were thus converted, in a short time, into a peaceable family circle, in which it was delight to exist. When those who had witnessed the disorder and wretchedness of the first beginning came to visit the asylum in the following spring they could scarcely identify, in the cheerful countenances and bright looks of its inmates, the haggard faces and vacant stares with which their imagination was impressed.

Thomas Jefferson was the first conspicuous advocate in this country of free education in common schools supported by local taxation as well as of state aid to higher institutions of learning. To him the school-house was the fountain-head of happiness, prosperity, and good government, and education was the "holy cause" to which he devoted the best thought and efforts of his life.

Jefferson's educational plan, which he prepared for the state of Virginia, provided, first, for elementary schools in every county, "which will place every householder within three miles of a school; district schools, which will place every father within a day's ride of a college where he may dispose of his son; a university in a healthy and central situation."—PRES. CHARLES W. DABNEY, University of Tennessee.

History of American Education.

Early Educational Journals and Teachers' Associations.*

By WILLIAM A. MOWRY. Ph.D.

AMERICA has nothing more characteristic than her system of education. This system has shown a remarkable evolutionary growth. Its development has much in it of interest to the philosopher, the student of history, the patriot, and the philanthropist. The American System of Public Schools has had a rapid growth since 1820. From 1820 to 1840 was really its formative period. The condition of schools anywhere depends principally upon the condition and qualifications of the teachers. Whatever improves the teacher improves the school in respect to its condition, moral tone, methods, and scholarship. Every one must admit that the typical American teacher has greatly changed for the better within the last fifty years.

The present improved condition has been largely brought about by three things :

(1) The establishment of educational journals.
(2) The foundation of normal schools for teachers.
(3) The introduction of efficient school supervision.

These three great agencies have produced a complete revolution in school affairs, and particularly in methods of instruction.

The state of New York appointed a superintendent of common schools in 1812. Other states followed.—Rhode Island in 1845, Massachusetts in 1848, Connecticut in 1850. Among the earliest cities to establish the city superintendency may be mentioned Springfield, Mass., Louisville, Ky., Buffalo, N. Y., Providence, R. I. (in 1839), and Boston, Mass. (about 1850).

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*A paper read before the International Congress of Education at Chicago. Published here for the first time.

The first Normal school for teachers, established on this continent, was opened at Lexington, Massachusetts, on the third day of July, 1839, with Cyrus Peirce as principal.

It has been, by many, supposed that the first educational periodical in the country was the *American Journal of Education*, published in Boston, in 1826. This, however, is a mistake. On February 7, 1818, was published in New York the first number of the first volume of a periodical for teachers entitled *The Academician*. In the preface to this first number the editors say : "The literature and state of education in our country will claim particular attention, and our exertions in their cause will be truthful and persevering." This periodical was edited and published, semi-monthly, by Albert and John W. Picket. Its price was three dollars per annum. Each number contained sixteen pages. The volume contained twenty-five numbers, the last of which appeared January 29, 1820. The editors of this magazine were men of learning and ability, prominent as teachers at that time. Among the most important articles contained in this publication may be mentioned the following, taken from the table of contents :

1. On the necessity of good instructors.
2. On men eminent as teachers and philosophers, and the estimation in which the office of preceptor was anciently held.
3. General observations on the utility of mathematics.
4 On scholastic and parental discipline.
5. On the necessity of employing capable instructors, and the injury and injustice done to society by quack pedagogs.
6. On mental discipline ; on the consequences of learning words abstractedly, and the necessity of connecting specific ideas with words.
7. On the evil tendency of theatrical representations at school.
8. On obedience and submission.
9. On the advantages derived to instructors in general from a knowledge of the mode by which the Deaf and Dumb are instructed. On teaching spelling and the elements of composi-

tion. On the importance of a knowledge of the prefixes and terminations of the English language.

10. On the necessity of incentives to exertion. On its benefits. On the influence of physical and moral causes. On diffusing a national emulation.
11. On the love of fame; its effects; its influence in rewards and punishments. On conferring rewards.
12. On the study of the Latin and Greek languages.
13. On the difficulties of teaching, and the conduct, in general, toward instructors.
14. On an English course of instruction.
15. On female education.
16. On the necessity of employing moral, as well as scientific, instructors.
17. On teaching geography.
18. On the proper method of teaching the English language.
19. Subject continued: On the necessity of understanding the force and meaning of the English prefixes and terminations; derivation, the synonyms, etc.
20. The same subject continued: On the absurdity of learning words abstractedly; on the necessity of learning ideas when words are learned; on determining the specific meaning of words from induction, or their collocation in sentences.
21. On learning English grammar.

The Inaugural Oration of Rev. Joshua Bates, on taking his seat as President of Middlebury college, Vermont.

Under the head of "Outlines of Philosophic Education" we find a careful treatment of various topics under these heads:

1. On the science of the human mind.
2. On the elements of intellectual culture.
3. On the education of art. Improvement of attention.
4. On the improvement of the faculty of attention.
5. On the improvement of the faculty of memory.
6. On the culture of imagination.
7. On the improvement of the power of judging and reasoning.
8. On the Baconian method of induction.
9. On the nature and utility of oral instruction.
10. On the utility of daily examinations in schools.
11. On the improvement of genius.

12. On the elements of taste.
13. On the importance of taste in composition.
14. On public lectures.
15. On themes.

The work contains a series of articles, critical and discriminating, upon the entire subject of grammar, English, and general. Another series on the teaching of mathematics; articles on the Lancasterian system of education; an important series of articles on Pestalozzi's method of teaching religion and moral principle to children; a comparison between Pestalozzi, Bell, and Lancaster, and their methods; accounts of various institutions of learning, such as Fellenburgh's school, the Virginia university, the Hartford Deaf and Dumb institution, the New York Institution for the Deaf and Dumb, Williams college, Columbia college, Union college, University of North Carolina, Fayetteville academy, and other institutions. The quotations from Pestalozzi are extended and valuable. The department of philology is written from a high point, philosophically and philologically. The whole work, from beginning to end, is of high character, and would be of great service to any reader at the present day.

I have mentioned the *Academician* and given the above brief account of it for the purpose of correcting the too common error, into which many have fallen, by supposing that the *American Journal of Education* was the first publication of this kind in the country.

American Journal of Education.

The publication of this monthly periodical was begun in January, 1826. It was published by Wait, Greene & Co., Court street, Boston, and was printed by Thomas B. Wait & Son. Each number contained sixty-four pages, and its subscription price was four dollars a year. The names of the editors were not given, but Dr. Henry Barnard is authority for the statement that the *Journal* was edited by William Russell and W. C. Woodbridge and William A. Alcott. It is believed that the first editor was Mr. Russell and that he continued his services for nearly three years. Many men of marked ability were interested in matters of public education in Massachusetts at that time. Among them might be mentioned: A. Bronson Alcott, Jacob Abbott, Ebenezer Bailey, William Calhoun, James G. Carter, Nehemiah Cleveland, Warren Colburn, Caleb Cushing, George B. Emerson, William C. Fowler, Josiah Holbrook, Horace Mann, Rev. Samuel J. May, Samuel P. Newman, Henry K. Oliver, Rev. John Pierpont, Asa Rand, Joseph Story, Gideon F. Thayer, George Ticknor, and Dr. John C. Warren. These were famous men. Many of them subsequently attained, not only high rank, but great popularity for their writings and their efforts in elevating the standard of education in New England. Concerning the necessity of such a publication, the editors in the first number speak as follows:

> A periodical work, devoted exclusively to education, would seem likely to be of peculiar service at the present day, when an interest in this subject is so deeply and extensively felt. At no period have opportunity and disposition for the extensive interchange and diffusion of thought been so favorably combined. Science and literature have their respective publications, issuing at regular intervals from the press, and contributing incalculably to the dissemination of knowledge and taste. But education—a subject of the highest practical moment to every school, every family, and every community—remains unprovided with one of those useful vehicles of information.

The editors also state the general design of the *Journal* to be:

> I. To record facts of importance concerning the present state of education in this country and in other lands. Also, to furnish the leading facts of the history of education in the past.
>
> II. To diffuse "Enlarged and liberal views of education." By these "Enlarged and liberal views of education" the editors plainly say is meant "The means of fitting man for the discharge of all his duties." They specially and distinctly state that this will include "Physical education or the training of healthy bodies, moral education, domestic and personal

education, or that which consists in the voluntary formation of individual character."

III. The education of women, which they consider "A matter of unspeakable importance."

IV. Elementory education, which they characterize as to have "More importance than that of any other period or department."

V. Higher education, including "The study of the sciences."

Mr. Russell retired from the editorship at the close of the third volume, and at the beginning of the fourth volume, January, 1829, the *Journal* became bi-monthly, with longer articles, and, consequently, a broader discussion of the topics considered. Two years later its name was changed to *American Annals of Education and Instruction*, a "Journal for Literary Institutions." At this time it returned to the plan of monthly issues. During this time its principal editor was Mr. William C. Woodbridge. Mr. Woodbridge continued in the editorial chair until the close of the volume of 1837, altho, for a considerable period, while he was detained in Europe by ill-health, the editorial duties had devolved upon Dr W. A. Alcott. Soon after the retirement of Mr. Woodbridge Dr. Alcott also withdrew and Mr. M. G. Hubbard became the editor. A fatal mistake was now made by the new editor. He turned the magazine away from its former design, which was to elevate the various grades of the common schools of New England, and the *Annals* now came to be the advocate of high schools, academies, and colleges.

Meantime, the commonwealth of Massachusetts had established the state board of education. Edward Everett was the first president of this board and Horace Mann was made secretary of the board, which was, in fact, the office of commissioner of public schools for the state.

It is interesting to observe that the salary which the great commonwealth of Massachusetts at first gave to this large-hearted man, laborious worker and deep thinker, was the munificent sum of one thousand dollars per annum, "Provided he should devote himself exclusively to the duties of his office."

Mr. Mann looked, with regret, upon this change in the magazine. and, in November, 1838, the first number of the *Common School Journal* was issued. Of this new periodical Mr. Mann was the editor for ten years.

In 1848, Mr. Mann was elected as representative to Congress. He, therefore, withdrew from his position as editor. The last number that was published, under his care, was that of December 18, 1848. He was succeeded by William B. Fowle, an earnest advocate of reform in educational matters at that day. The publication was continued under the editorship of Mr. Fowle for four years more. It was discontinued with the volume for 1852. The first publishers of the *Common School Journal* were Capen, Lyon & Webb, afterward Fowle & Capen, and, later still, William B. Fowle. It was published twice a month, an octavo, price, one dollar a year.

These two periodicals, the *American Journal of Education*, later called the *American Annals of Education and Instruction*, covering the period from 1826 to 1838, and the *Common School Journal* from 1838 to 1852, exerted a great influence upon the educational thought of America. Their subscription lists were never large, but they were read by the leading educators in all parts of the country. They covered that period of agitation in educational matters which resulted in better schools for the Old Bay state, for New England, for the whole country. Within this period was the entire term of service of Horace Mann as secretary of the Massachusetts board of education. The editors. William Russell, William Channing Woodbridge, William A. Alcott, Horace Mann, and William B. Fowle will readily be recognized and acknowledged by all as among the most profonnd thinkers and earnest advocates of improved methods in education that this country has ever produced.

The time had arrived when great improvements must be undertaken in educational affairs. Warren Colburn's "Intellectual Arithmetic" had virtually introduced into New England the real spirit of Pestalozzi's method of instruction. Mr. James G. Carter had written many able editorials for the *United States Literary Gazette.* Dr. Barnard, in the third volume of his *Journal,* says: "The light shed on the whole subject of education by the labors of Pestalozzi had excited, thruout Europe and America, a fresh interest in all the great questions involved in the various departments of physical, intellectual, and moral culture."

In the *American Journal of Education* William Russell, the editor, discussed such subjects as "Infant Schools," "Elementary Education," "High Schools for Girls," "Schools for Teachers," and "The Lyceum." A. Bronson Alcott, in a letter to George B. Emerson, says: "It is no disparagement of later journals to affirm that none have embraced a wider field of speculation or practice, or more ably dealt with the leading principles of human culture."

Horace Mann is everywhere recognized as having been, in his day, a vigorous thinker and a great reformer in matters pertaining to education. The tremendous amount of labor which he performed while he was secretary of the Massachusetts board of education was enormous. In his supplementary report, 1848 he said: "From the time I accepted the secretaryship on January 1, 1837, until May, 1848, when I tendered my resignation of it, I labored in this cause an average of not less than fifteen hours a day; from the beginning to the end of this period I never took a single day for relaxation, and months and months together passed without my withdrawing a single evening to call upon a friend."

In the midst of such labors as these is it not a marvel that he should, almost single-handed and alone, conduct a vigorous magazine, published semi-monthly, wherein he discussed the great principles of education and their practical application in the schools? He himself considered this *Journal* to be "The right arm of his power and influence, and the great reforms which he inaugurated in teaching, and the revolution in public sentiment effected during his remarkable administration may be traced to the *Journal* as the most important agency." The following is an extract from Mr. Mann's valedictory in the number for December 18, 1848, and gives a distinct view of the condition of educational journalism at that day:

> It came to the public as their fate, rather than as a consequence of their free will. It was born, not because it was *wanted*, but because it was needed. Tho the *Journal* is but ten years old, yet, compared with any other journal devoted to the cause of education in this country, its age is patriarchal. One, the Albany *District School Journal*, which was established about two years after this, having been nourished by the bounty of the state, still survives. But numerous others, subsequently commenced, have been sad remembrances of the brevity of life. Some have died as soon as born because they had no life, no vital organs within them ; but others, and the far greater number, have perished from the bleak atmosphere, the coldness of the world into which they were born. May the survivors long live to earn the highest of all rewards, the reward of well-doing, and may their last days be their best days.
>
> Our motto used to be "The cause of education, the first of all causes." Recent events, however, of a national character, have forced upon the public attention the great truth that, before a man can be educated, he must be a free man. It is, in obedience to this truth, that the editor of the *Journal* now leaves the immediate field of education to assist in securing, as far as one vote among two hundred and thirty votes in one department of the national councils can do it, the *freedom of man* in regions yet unoccupied by civilized races, so that the vast territories, which are now roamed over by savage hordes, may rise from barbarian life into civilization, instead of sinking, in this nineteenth century of the Christian era, from the depths of barbarism into the abyss of slavery.
>
> It is no alienation, therefore, from the cause of education, but only to secure a sphere where education may "Run and be glorified" that occasions this apparent departure from his long loved field of labor. Than these causes what can be nobler? For these causes who would not be willing to fall, tho he should fall like Arnold of Winkelried—his body a "Sheaf of spears"?
>
> With a comprehensiveness of meaning that embraces both worlds we wish our readers and friends, Farewell.

Teachers' Associations.

We are now considering that period of time when teachers' associations were being formed. The "American Institution of Instruction" was the cause of the first of these general associations for the uplifting of education. Its first meeting was held in Boston in 1830 and its first president was Dr. Francis Wayland.

The first state association of teachers, which has had continued existence to the present time, was the "Rhode Island Institute of Instruction." This was organized January 25, 1845, and John Kingsbury was its first president.

The Massachusetts Teachers' Association was organized November 24, 1845, and Oliver Carleton, of Salem, was president. At this meeting the association appointed a committee to report on the expediency of establishing a teachers' journal. This committee, at the second annual meeting of the association in November, 1846, decided in favor of establishing such a journal, and the association appointed a committee of five, "With discretionary power to establish such journal, provided it can be done without subjecting the association to pecuniary responsibility and that this committee act as an editorial committee in conducting it." By virtue of this vote the first number of the *Massachusetts Teacher* was published in January, 1848. The publishing committee consisted of Thomas Sherwin, John D. Philbrick, Samuel W. Bates, and Charles Northend. The first editorial board consisted of Samuel W. Bates, of Boston; George B. Emerson, of Boston; Oliver Carleton, of Salem; Charles Northend, of Salem; Ariel Parish, of Springfield; C. S. Pennell, of Charlestown; John D. Philbrick, of Boston; Thomas Sherwin, of Boston; P. H. Sweetser, of Charlestown; Gideon F. Thayer, of Boston; Benjamin F. Tweed, of Charlestown, and William H. Wells, of Andover. Of these distinguished educators only Mr. Northend and Mr. Tweed are believed to be now living.

The *Teacher* was in octavo form and each of the first few volumes contained thirty-two pages, and, of later volumes, forty-eight pages. The subscription price was one dollar a year. It continued to be published under the auspices of the Teachers' Association for twenty-seven years.

A board of twelve editors was appointed annually by the association, each person editing one number. During most of these years, in addition to the twelve editors, there was also a resident editor.

The character of this journal, as of any periodical under a board of editors and managed by an association, could not be expected to preserve that unity of purpose and continuity of work which had characterized to such an eminent degree the two preceding publications already described. It was, however, edited with much ability and it embodied and represented the best educational thought of the day upon practical subjects connected with common school education.

Covering, as it did, a period of more than a quarter of a century, from January, 1848, to January, 1875, during which time the American Institute had done vigorous work, the National Educational Association had been formed (1857), and had exerted a wide influence upon the teachers of the country; institutes had become common thruout the North, and wherever a state system of public schools had been established normal schools were in operation in a large majority of these states. The old memoriter method of instruction was passing away; a new system of object teaching had been introduced. More reasonable methods of learning to read were being advocated here and there and improved text-books, made by the most successful and thoughtful teachers, were coming into vogue. Its volumes present a record of earnest thought and decided educational advancement. It may be questioned whether any single state can exhibit to-day a set of volumes of a teachers' journal which embody more vigorous thought, true doctrine, or valuable suggestions than these twenty-seven volumes of *The Massachusetts Teacher.*

(To be continued.)

Pedagogical Discussion.

The Philosophical Basis of Education.

VIEWED FROM AN EVOLUTIONARY STANDPOINT.

By E. P. POWELL, New York.

A FEW years ago the lamented Edward Cope showed that the whole family of mammalian quadrupeds had descended, or rather, ascended, from a single ancestor. And he added in 1874, "When that ancestor is found, I prophecy that it will be found to be plantigrade, bunodont, and penta dactyle;" that is flat-footed, five-toed, and with teeth tuberculated. Only a few years later, I think it was in 1881, while he was in the Wyoming beds, the same great paleontologist found the very fossil form, back to which, on converging lines, runs the heredity of all milk-giving quadrupeds. This fossil animal goes as the Phenocodus primevus, of the condylarthra family. Now I do not have any purpose to discuss a paleontological problem, or to enter into a defence of the evolution hypothesis.

But what I want to call your attention to consider is the process, whereby out of this creature that existed millions of years ago, were educated (drawn out) and selected a dozen great sub-families; including not only all hoofed animals, but the lemurs and monkeys. It was a creature very adaptable to education; that is it had hardly a single organ or function which was completed. It was plastic to influences. It could be improved in its feet and legs, and in the long ages following, there came about by education of feet and legs, mammalians capable of great fleetness, such as horses and antelopes. It could be evolved or educated especially in the line of the fore feet or paws; and so it was able to become in time the fighting felines that live by claw, and others in which the claws look toward hands and tool-makers. The creature was very educable in voice, in muscle, in nerve, in senses, and in brain. But as education bore all its force on one of these points that function, or that organ, was not only developed, but, in the developing, other functions were suppressed. So in this vast family you got a fleet antelope, relying for defence upon horns, besides a tiger depending upon teeth and claws. In another direction education, following the line of toe development, produced the horse; and, still more wonderful, the monkey with its climbing arms and larger brain.

Suppose now you had the supervision of this mighty educational system, and it was yours to direct all this evolution of power, as indeed at the present day all this education is transferred to man. For man to-day is not only setting up schools to train mankind, but to modify and further the evolution of animals as well as human beings. What would be your system—your fundamental principle of work?

Undoubtedly you would say of the horse, Here is a creature that has so gone to foot development, and to draught muscles, that it would be folly for me to undertake to train it to become a milk-giver. You would not undertake to change in the cow herbivorous teeth to those used by its carnivorous relatives. The horse today is educable as a racer and a roadster. Man has made no blunder in creating the Normans, the Arabians, and other typical breeds for domestic use. The cow, out of the same family, is educable for milk giving, and for flesh; and man has educated out of the common herd for diverse purposes the Jersey, the Ayrshire, and the Durham. The dog is educable also in many ways; but still as the dog. The hog was a baser, yet a useful evolution, that we have not failed to put to school; and with remarkable results. I do not say we could not have done much more with any one of these sub-families of the condylarthra; but we could not have carried one of these diversified and specialized products of nature's school over to another. We could not make the horse and the tiger to exchange places. There are utterly voided powers, and there are absolutely controlling instincts, created by the long education thru which these creatures have passed, that now never will be eradicated.

I think we have here the very key to human education that we need ; the underlying principle that should direct all education of the human child. That principle is, not only do not undertake to make one race over into another, or one individuality into another, but also apply your efforts to find out where nature has left the child plastic to change. Direct all your effort at that point, or at those points. The human being, in general terms, is unfinished, and therefore educable, at these three points : the hands, the articulating organs, and the frontal brain. Man differs from other creatures in the speech organs, the tool-making organs, and the thinking organs. Should not education, with some degree of equipoise, be applied at these three points?

My object is not here to enlarge on the need of manual or hand education, or education in eloquence and music, as well as education of the brain ; but my object has been rather to give a scientific and philosophical basis for such education.

QUESTIONS.

1. What is meant by educability? Illustrate.
2. What are the starting points in the education of children?
3. How does man differ from other creatures? What object or objects of education are suggested by these differences?
4. What is meant by an evolutionary view of education? Illustrate.

The editor would like to receive full reports of discussions at educational gatherings devoted to a serious study of the problem outlined above. Suggestions as to how to render the magazine more helpful to individual students would also be very much appreciated. His address is 61 East 9th street, New York.

Teachers' Examinations.

Examinations for State Certificates.

(Questions used in the State of New York, August 25-29, 1902.)

SCHOOL LAW.

1. What subjects must be taught in all public schools?

2. What certificates granted in other states may the state superintendent by endorsement make good in this state?

3. Name two subjects which are covered by the affidavit of a teacher to his register.

4. What are the legal provisions concerning a board of education as to (a) number of members; (b) how chosen; (c) how removed; (d) how vacancies are filled?

5. In case of a union free school district, to whom must the supervisor pay over all moneys apportioned to the district?

6. What is the provision of law in respect to non-resident pupils, in case their parents or guardians are taxpayers in the district in which such pupils attend?

7. State two provisions of law enacted to protect school children in case of fire.

8. What restriction is placed on a board of education in respect to hiring a teacher related to a member of the board?

9. State the provision of the compulsory education law relative to the employment of children required to attend upon instruction.

10. What is the legal requirement relative to the teaching of physiology and hygiene with special reference to the effects of alcoholic stimulants and narcotics (a) in the lowest primary grades; (b) between the third primary grade and the second year of the high school?

GRAMMAR.

The fact that Monmouth was in arms against the government was so notorious that the bill of attainder became a law with only a faint show of opposition from one or two peers, and has seldom been severely censured even by Whig historians. Yet, when we consider how important it is that legislative and judicial functions should be kept distinct, how important it is that common fame, however strong and general, should not be received as legal proof of guilt, how important it is to maintain the rule that no man shall be condemned to death without an opportunity of defending himself, and how easily and speedily breaches in great principles, when once made, are widened, we shall probably be disposed to think that the course taken by the Parliament was open to some objection. —T. B. MACAULAY.

NOTES.—1. A combination of subject and predicate is called a clause. Clauses are principal or subordinate.

2. Subordinate clauses include (*a*) subject clauses; (*b*) objective clauses; (*c*) adjective clauses; (*d*) adverbial clauses.

3. In naming a clause, include only its unmodified subject and unmodified predicate.

4. A preposition with its object is called a phrase.

5. In naming a phrase, give only the preposition and its unmodified object.

6. A modifier may be a word, phrase or clause.

7. An object of a transitive verb is classed as a modifier of that verb.

8. Only eight parts of speech are recognized—the articles *the* and *a* forming a subdivision of adjectives, and participles being one of the forms of verbs.

9. Infinitives are classed as modes of the verb.

10. In parsing a noun or pronoun, observe the following order; class, person, number, gender, case. Give the reason for case. In parsing a relative pronoun, state the agreement with its antecedents.

11. In giving the syntax of a noun or pronoun, give only the case and the reason for it.

12. Treat verbs as divided into two classes only, viz.; transitive and intransitive; a transitive verb may be used in the active or the passive voice.

13. In parsing a verb, observe the following order; principal parts, regular or irregular, transitive or intransitive, voice, mode, tense, person, number, agreement; give the special use of an infinitive or a participle after tense.

1-2. Select two principal clauses and eight subordinate clauses, and classify the subordinate clauses selected according to note 1.

3. Give (a) three modifiers of *has been censured* (line 4); (b) two of *functions* (line 6).

4. Select two infinitives, and give the syntax of each.

5. Select two participles, and give the syntax of each.

6. Select five verbs in the passive voice, and give the mode and tense of each.

7. Give the syntax of (a) *law* (line 3); (b) *even* (line 4); (c) *proof* (line 8).

8. State what are connected by each of the following words: (a) *that* (line 2); (b) *and* (line 4); (c) *yet* (line 5); (d) *when* (line 5); (c) *that* (line 9). (Name clauses according to note 2.)

9. In sentences give example of (a) an abstract noun; (b) a verbal noun; (c) a collective noun used as the subject of a singular verb; (d) a collective noun (singular in form) used as the subject of a plural verb; (e) a relative pronoun. Indicate the required words by underscoring.

10. In sentences give example of a verb in the passive voice, taking after it a noun (a) in the nominative case; (b) in the objective case (not indirect object). Give syntax of each noun so used.

CIVIL GOVERNMENT.

1. In this state what qualifications must a woman have to vote (a) at school meetings; (b) at village elections? (c) For what special object may women vote at village elections?

2. Give the two methods of procedure in amending (a) the constitution of the United States; (b) the state constitution.

3. Mention (a) three town officers required to give bonds; b) two duties of each.

4. (a) Give three legislative powers of the board of supervisors. (b) What officers are elected at the organization of this board?

5. Name five sources from which the United States derives revenue.

6. Name five exclusive powers of the house of representatives as provided by the constitution.

7. Each Congress usually holds two sessions known as the long and the short session. How long may each session continue?

8. How is the constitutionality of the laws (a) of the United States determined; (b) of the state?

9. Name three special taxes from which the state derives a large part of its revenue.

10. (a) Name five administrative officers appointed by the governor with the consent of the senate. (b) State two important duties of each.

GEOMETRY.

1. Define (a) variable; (b) constant; (c) limit of a variable; (d) locus of a point.

2. Prove, that when two parallel lines are cut by a transversal the alternate interior angles formed are equal.

3. Explain how you would construct: (a) the complement of a given angle; (b) the supplement of a given angle; (c) the third angle of a triangle, the other two being given, without constructing the triangle.

4. Prove, that thru three given points, not in the same straight line, one circumference, and only one, can be constructed. State a fact, of general application, of locus of points, used in demonstrating the above proposition.

5. Prove, that if four quantities are in proportion they are in proportion by alternation.

6. Prove, that in the same circle or equal circles two incommensurable angles at the center are to each other as the arcs which the sides of the angles intercept on the circumference.

7. (a) The lengths of the segments of a chord, intersected by another chord, are a and b, and the length of one segment of the intersecting chord is c. Find the length of the other segment. (b) From a point 26 inches from the center of a circle whose radius is 10 inches, draw tangents to the circle and connect by a chord the points of tangency. Find the lengths of the segments made by the chord cutting the line joining the point with the center of the circle.

8. Prove, that if two triangles have their sides proportional the corresponding angles are equal.

9. Construct a square equivalent to a given rectangle and prove your construction correct.

10. In a right triangle the perpendicular from the vertex of

the right angle to the hypotenuse divides the triangle into two triangles which are similar to the whole figure and to each other. State and prove the converse of this proposition.

PHYSICS.

1. Describe an experiment to show the diffusion of gases.

2. How may it be shown that air has (a) weight; (b) elasticity; (c) compressibility?

3. A frost in the fall frequently shows on a board walk but not on an adjoining stone walk, while in the winter thin ice is frequently found on the stone walk and not on the board walk. Explain the physical causes of such phenomena.

4. A cubic block of metal, two feet on each edge, weighs 6,000 pounds. What is the specific gravity of the metal?

5. (a) State the purpose of the telegraphic sounder and the telegraphic relay. (b) Show by diagram the construction of the sounder.

6. Describe and illustrate by diagram (a) the construction and (b) the action of an electric bell.

7. If 25 pounds of ice at 0° C. be mixed with 4 pounds of steam at 100° C., what will be the temperature of the liquid?

8. Illuminations of equal intensity are thrown upon a wall by a candle three feet distant and a lamp nine feet distant. Compare the intensity of the two lights.

9. Describe and illustrate by diagram the path of rays of light in a compound microscope.

10. A cubical vessel has a capacity of 4,096 cubic inches and is three-fourths full of water. Find the pressure on one side of the vessel.

GEOLOGY.

1. During the Devonian period what were the characteristic (a) animals; (b) plants?

2. (a) Describe a canon. (b) How are canons formed?

3. (a) How are glaciers formed? (b) What causes their motion? (c) How far south in North America are evidences of the great glacial movement found?

4. What is (a) dip of rocks; (b) strike; (c) outcrop; (d) fault; (e) joint?

5. Mention, in order from north to south, five outcrops of rock found in the state of New York.

6. Mention three agencies that are constantly wearing away rocks.

7. (a) Describe stratified rock. (b) Distinguish between layer and stratum. (c) Name three kinds of stratified rocks.

8. Give in order the four grand divisions of geologic history.

9. (a) Mention two kinds of rocks made chiefly from organic substances. (b) Name the most important formation of the carboniferous period, two varieties of it, and state how they differ in character and in formation.

10. (a) Describe limestone as to material from which it was formed, as to structure and stratification. How was (b) marble formed; (c) chalk?

CHEMISTRY.

1. (a) What per cent. (by weight) of sulphuric acid is sulphur? (b) What per cent. of nitric acid is nitrogen?

2. What is meant by isomerism? Give an example.

3. Name five properties of carbon dioxide. Give a test for its presence in a free state, and three natural sources.

4. What is (a) the reducing flame; (b) the oxidizing flame? Show by a drawing the position of each.

5. Give the symbol of (a) calomel; (b) corrosive sublimate; (c) sal ammoniac; (d) white vitriol; (e) copperas.

6. Describe and explain the effects produced when there is inserted in a jar of chlorine (a) a piece of wet calico; (b) a paper saturated with oil of turpentine.

7. (a) What is the chemical name of quicklime? (b) How is it prepared? (c) Why is it an essential part of mortar?

8. What are the principal steps in the Le Blanc process of preparing carbonate of soda?

9. Give the equation illustrating a chemical reaction which may occur (a) by direct combination; (b) by substitution.

10. Explain the application of the spectroscope to chemical analysis.

COMPOSITION AND RHETORIC.

1. Recast the following sentence with special reference to securing brevity and clearness: "As every one may not be acquainted with the primitive game of hunt-the-slipper it may be necessary to observe, that the company in this play plant themselves in a ring on the ground, except one who stands in the middle whose business it is to catch a shoe which the company try to shove about without detection."

2. Make a list of four synonyms of each of the following: (a) fire (noun); (b) flock (noun); (c) call (verb, transitive); (d) get (verb, transitive); (e) frank (adjective).

3. Write to Ezra Hyde, president of the board of education at North Adams, Mass., applying for a position as teacher. State educational advantages and experience, and give references.

4. Rewrite such of the following sentences as are incorrect, giving reasons for each correction:

(a) The phenomena are very strange.
(b) Neither of us have had a vacation.
(c) Now I lay me down to sleep.
(d) The rain lay the dust.
(e) It is quite cold.
(f) You must speak slower.
(g) The dress feels soft.

(h) One doesn't always come when they are expected.
(i) A couple of weeks ago you was here.
(j) Shall you travel in Europe?

5-6. Write a composition of not less than 75 words on one of the following topics: American expositions. The noon recess (how your children spend the noon hour). The rights of school children.

7. Make the following sentences emphatic:
(a) The judge of all the earth will do right.
(b) Few women are good business women.
(c) You have helped me generously and freely.
(d) To err is human but forgiveness is divine.

8. What is (a) description; (b) narration; (c) exposition; (d) argumentation?

9. (a) What is the aim in description? (b) Name four requisites of good description.

10. State four ways of developing topic sentences into paragraphs.

GENERAL LITERATURE.

1. Give briefly the information to be gained from reading "Montcalm and Wolfe" on any one of the following topics: (a) The Acadians; (b) The attack on Louisburg; (c) The attack on Quebec; (d) Braddock's defeat.

2. Compare briefly Parkman's account of the treatment of the Acadians with Longfellow's in "Evangeline."

3. What is the theme of Goldsmith's "Deserted Village"?

4. Describe Auburn in (a) its prosperity; (b) its adversity.

5. (a) Of what country was Goldsmith a native? (b) Where was he educated? (c) Name three of his most noted works.

6. What moral thought underlies the novel "Silas Marner"?

7. What are three of the best descriptions in "Silas Marner"?

8. What is the plan of "Prue and I"?

9. Give the subject and theme of any three of the essays in 'Prue and I."

10. "The Virginians" is a historical novel (a) treating of the period during the reign of what English kings; (b) speaking of what famous wars; (c) mentioning what historical characters?

GEOGRAPHY.

1. (a) What points and lines on the earth's surface are determined from its axis? (b) How does the axis compare in length with other straight lines drawn thru the earth's center? (c) What is meant by "the inclination of the earth's axis to the plane of its orbit"?

2. (a) Define climate. (b) Name four conditions which largely affect climate.

3. (a) Name a large river which has built a delta and explain

such formation. (b) Name a large river which has not formed a delta and explain why no such formation has occurred.

4. What are the chief products of (a) Alaska; (b) Porto Rico; (c) the Philippine islands; (d) the Hawaiian islands?

5. (a) Give the location of five river valleys of the state of New York each containing a city. (b) Name these cities.

6. (a) Name four countries of Africa tributary to European nations and the nations to which each belongs. (b) Name one kingdom and one republic of Africa.

7. (a) What grand division of the earth is almost entirely composed of republics? (b) What provinces in this grand division? (c) To what nation does each province belong?

8. With reference to China, state briefly facts relating to (a) education; (b) religion; (c) government; (d) general political divisions.

9. Name in order the bodies of water thru which a vessel would pass in a journey from (a) Liverpool to Calcutta; (b) Glasgow to Odessa.

10. (a) What four kingdoms in the German empire? (b) Of which is the emperor king?

METHODS AND SCHOOL MANAGEMENT.

1. (a) How early in the school course should the study of history be begun? (b) What should be the nature of the work at first?

2. State five proper incentives to educational activity in school.

3. What should determine the promotion of pupils in (a) primary schools; (b) grammar schools; (c) high schools?

4. Name two purposes of discipline in the school-room.

5. (a) Give two results to be secured by the proper use of supplemental reading: (b) Give a list of five books, other than school readers, adapted for supplemental reading in the first three grades, and name the author or publisher of each.

6. (a) Why should objects be used in teaching? (b) In what part of the school course should they be most largely used? (c) What danger is to be guarded against in object teaching?

7. What is the chief value in having pupils make collections of woods, minerals, plants, etc.?

8. What should be accomplished in the first four years of school life in (a) reading; (b) number.

9. Name three characteristics of a teacher that contribute largely to his success.

10. State three ways in which pupils' memory may be aided.

HISTORY OF EDUCATION.

1. What purpose is served by the study of the history of education?

2. In Athens what aid was given to public education by the state, and to what extent did it exercise control?

3. Make five criticisms on Chinese education.

4. Christ was called "The Great Teacher." What was his method regarding (a) his hearers; (b) his illustrations; (c) his language?

5. What was the effect of the monasteries upon the preservation of knowledge during the dark ages?

6. Name five universities that were established thru the influence of scholasticism.

7. From an educational standpoint discuss the great renaissance, stating when and where it occurred and the influences that brought it about.

8. (a) What great service did Melanchthon render the schools? (b) Name three subjects upon which he wrote text books.

9. Give a brief sketch of the educational life and work of Francis Bacon.

10. (a) What is the greatest educational work of Rousseau? (b) Give a brief sketch of the teachings of the book.

AMERICAN HISTORY.

1. (a) What dangers threatened the New England colonies and brought about their confederation in 1643? (b) What colonies were included in the union?

2. (a) What important question was settled by the victory of Wolfe at Quebec? (b) State what effect this victory had on the subsequent history of North America.

3. State briefly the events in and around Boston that led the British government to close the port of Boston and send an army to that city.

4. Give a brief account of the war in the Carolinas in 1780 and 1781.

5. What measures were devised by Alexander Hamilton to raise a revenue and to establish national credit?

6. Discuss the "westward movement" as to (a) approximate period; (b) causes; (c) obstacles; (d) results.

7. State three issues in the campaign of 1832 resulting in the re-election of Andrew Jackson as president.

8. State some important fact in connection with the life of (a) John C. Fremont; (b) William Lloyd Garrison; (c) John Meriwether Lewis; (d) George Rogers Clark; (e) Cyrus W. Field.

9. Briefly describe the services of Admiral Farragut during the Civil war.

10. How did the government aid in the building of the first Pacific railroad?

ARITHMETIC.

1. Simplify (a) $\frac{\frac{2}{3}+\frac{3}{7}}{7-\frac{4}{5}} \div \frac{\frac{2}{9}}{3\frac{1}{2}}$; (b) $4+3\times7-13+3\frac{1}{4}$.

2. If the current of a river averaging 10 ft. deep and 40 rods

wide moves 4 miles an hour, how many gallons of water pass a given point each second?

3. If a man walks 5 miles per hour, how many minutes will it take him to walk around a 10-acre rectangular field with a length twice the width? (Answer correct to two decimal places.)

4. An agent sells a set of books for $80 and takes a note, without interest, payable in four equal payments upon the first day of each succeeding month. Immediately after the second payment is made he sells the note to a bank at 6% discount. Find the entire amount received by the agent.

5. What number increased by $\frac{1}{2}$ of $\frac{2}{5}$ of 10% of itself equals 969? Give full analysis.

6. When goods are purchased at 25% off, what per cent. of gain is realized by selling at 5% advance on the list price?

7. A room measures 5m. long, 3m., 2dm. wide, 3m., 4dm. high. Find (a) the area of the walls and ceiling; (b) the cubical contents.

8. What is the time of day when the time past noon is to the time to midnight as $\frac{3}{4}$ is to $\frac{7}{12}$?

9. The wheels of a bicycle are 26 in. in diameter, the sprocket wheel of the pedal has 24 sprockets, the other 8. How many miles an hour is made by one revolution of the pedals per second?

10. Define (a) factor; (b) root; (c) power; (d) evolution.

Examinations for County Certificates.

(August 14 and 15, 1902.)

DRAWING.

NOTE.—Use compasses for drawing circles. Take measurements from ruler. The measure of all work shall be at least one inch.

1. (a) Name the three colors most commonly found in nature; (b) define *scale* as used in color study; (c) explain the combination of colors known as contrasted harmony and give three examples.

2. Construct an angle of 120° and bisect same; leave all work upon the paper.

3. Give the names of four necessary tools used in mechanical drawing not including pencil and ruler.

4. Make a working drawing of an ordinary circular wooden chopping bowl, also show vertical cross section.

5. Sketch to represent a group composed of a chair, a lantern, and a broom. Shade and accent sharply.

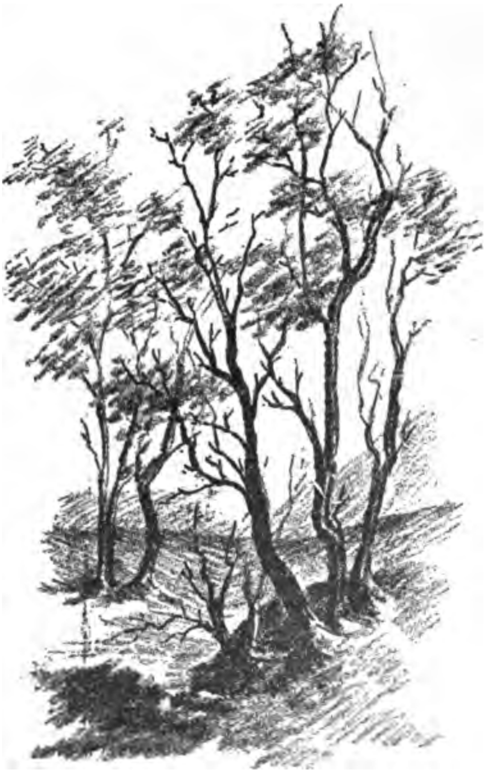
6. Draw to represent whatever you see thru the lower half of a window in the room in which you are sitting.

7. (a) After a drawing has been outlined, what may be added to the P. P. as an aid in proving correct location of objects? (b) Upon what line is the M. P. found when working with horizontal planes?

8. Draw in masses to represent a pitcher, cup, and dipper. Use care in grouping.

9. Explain what *action lines* are, in a sketch.

10. Copy sketch. (No credit will be allowed if mechanical aids are used in answering this question.)



ENGLISH COMPOSITION.

1. Punctuate the following:

Here Rip Van Winkle would sometimes seat himself at the foot of 'a tree and share the contents of his wallet with Wolf with whom he sympathized as a fellow sufferer in persecution Poor Wolf he would say thy mistress leads thee a dog's life of it but never mind my lad whilst I live thou shalt never want a friend to stand by thee.

2. Combine the following into one well-expressed sentence:

The table stood ready for the evening meal of Cedric the Saxon. The table was long. It was oaken. It was formed of planks. The planks were rough-hewn from the forest. The table stood in the hall. The height of the hall was greatly disproportioned to its extreme length and width.

3. Break the following into four simple sentences:

On a winter's day we take our peep into the school-room, which is warmed by a broad fireplace, in which a bright blaze goes leaping up the chimney, from which, every few minutes, a vast cloud of smoke puffs into the room and sails slowly over the heads of the scholars until it gradually settles upon the walls and ceiling, which are already blackened with the smoke of many years.

4-5. "He was a brisk, tight little man, with the air of an arrant old bachelor." Complete this description, supplying such details about eyes, nose, mouth, hair, expression, manner, and disposition, as shall most effectively depict a person who is eccentric, yet notwithstanding a great favorite with women and children.

6. Henry Hardy, one of your pupils, has misrepresented to his parents your treatment of him in school. The trustee, at the request of Henry's parents, has written you asking for an explanation. Write a satisfactory report of the situation as it actually is.

7. Write three opening sentences and two closing sentences for a friendly letter, acknowledging the receipt of a gift of Longfellow's poems and "Uncle Tom's Cabin." Make your sentences easy and conversational, avoiding the trite "Your gift received on Friday," "Am pleased to receive, etc.," "Well, I must close," and similar stereotyped expressions.

8. Distinguish between the meaning of (a) modern—recent; (b) aggravate—irritate; (c) force—strength; (d) frightful—awful.

9 Explain the fault, if there is any, in each of the following sentences and make corrections: (a) He received divine help from God. (b) In one evening I counted twenty seven meteors sitting on my piazza. (c) She was a girl of great beauty and who never seemed conscious of the fact. (d) The Count came riding up crying "I will not surrender, except to death." (e) If either the principal or the teacher had lost their head many children might have been killed.

10. "All language must be learned thru imitation." What does this mean to you in your own study of language?

History of Our Times.

In nearly all the states a knowledge of current events is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort. The articles are brief and all useless matter is omitted. If in reading the paper you frequently refer to the Cumulative Index, especially when any topic is referred to more than once, you will be surprised at the wealth of knowledge the little paper contains.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

Questions on Current History.

(See *Our Times* for Oct. 15 and Nov. 1.)

Who were appointed on the commission to arbitrate the dispute between the coal operators and the Pennsylvania miners? What points are the arbitrators to consider?

What important decision has recently been given in regard to Porto Ricans?

Why are American troops to stay in Cuba?

On what mission has Rear-Admiral Evans been sent up the Yang-tse river?

What was the result of the Baldwin-Ziegler Arctic expedition?

Tell of an important service Zola rendered humanity.

What great historian lately died?

Why has a memorial been placed in Shipka pass?

Describe the treaty just made between France and Siam.

What does Mexico propose to do in Yucatan?

How much of the "Cape to Cairo" railroad is already completed? What work is yet to be done?

What is the population of China? How many to the square mile?

Why is Crete not likely to get what it asks for now?

Give reasons for the opposition to the educational bill in England.

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Vol. XIV, No. 4 Monthly, $1.00 a Year
DECEMBER, 1902.

EDUCATIONAL FOUNDATIONS

A Monthly Magazine of Pedagogy and General Culture *for* Teachers, Normal Schools, Training Classes, Reading Circles *and* Home Study

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The decoration of the school-room has become a real need in the proper education of children. The awakening to things artistic in America is a natural and wholesome indication that, even in the midst of the "strenuous life," we are commencing to find some time to enjoy what is beautiful. It is most fortunate, and significant too, that the schools have so early caught the spirit of this awakening. Children are unconsciously influenced by what is beautiful around them, and the effect a few years hence, of educating a generation of school children to some appreciation of art, will be incalculable. When a fine picture, for example, is related in some way to history or to literature its value as an educative influence is twofold. In view of these facts and conditions, and to help thousands of teachers in decorating their school-rooms well, yet inexpensively, we have prepared this series of Portraits.

These are much the finest of their class that have yet been made. Each is an exact reproduction of an exquisitely fine crayon portrait. The drawings for these cost nearly five hundred dollars, besides the trouble to secure a really fine picture from which to draw.

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POE We have just added to the above list two new portraits, Poe and Dickens. These are from exceptionally fine originals, have **DICKENS** been reproduced with great care and are most attractive for school-room decoration. As a special inducement for early renewal, we will give to each subscriber to EDUCATIONAL FOUNDATIONS who sends in renewal during December, a choice of either one of the new portraits, Poe and Dickens, *free*. In this way you can make to your school a beautiful Christmas gift which will be a delight through the year.

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Educational Foundations

Ossian H. Lang, Editor.

Vol. XIV. DECEMBER, 1902. No. 4.

Another of the great captains of American education has passed away! Dr. Emerson Eldridge White was one of the really strong leaders, whose influence has been a power in the shaping of educational policies. Those who have known him only in his last years may not always have recognized the strength that was in him. The force of his best educational endeavor was felt most deeply in the early years of common school pioneering, when the normal school idea was pleading for acceptance and teachers began to form organizations.

Dr. White was counted among the conservatives, and he was an educational conservator. His master mind had to be convinced by solid reasoning before he could be moved to follow up a new star appearing in the firmament. He opposed strenuously every attempt at destruction of anything his firmly-rooted judgment had found to be of real educational benefit to the children of his country. He had no patience with exaggerated claims and shams. His was the calm, well-informed, deeply grounded, scholarly, 'judicial type of mind, so rare that we involuntarily hesitate calling it a type; in the educational world it is found rarest of all.

Dr. White was born at Mantua, Ohio, in 1829. He was educated in the common schools of his native state and at Cleveland university. In 1851 he became principal of one of the Cleveland grammar schools. In this position his thoro *study of* education as applied to school practice led to his appointment to the principalship of the Central high school of Cleveland. Later, as superintendent of the schools of Portsmouth, Ohio, he introduced methods far in advance of those generally employed. He served as state commissioner of the Ohio schools for three years; as president of Perdue university from 1876 to 1883, and also as superintendent of schools at Cincinnati.

For a number of years Dr. White has devoted himself to writing and lecturing. His series of arithmetics and his "Elements of Pedagogy" are known the country thru. His most popular lectures were on "Character" and "The Duty of the Hour."

Those who knew Dr. White most intimately have felt for some time that his physical strength was failing. Since the death of his son, and especially since his beloved wife, Mary Sabin White, passed away, he has seemed to lose his hold upon life and simply to be waiting for the summons calling him home. Three children survive him, one of them, A. B. White, being the governor of West Virginia.

The death of Dr. Emerson E. White, ought to be remembered by all teachers' conventions held this month, and, wherever possible, memorial resolutions ought to be adopted. Dr. White in his lifetime probably addressed more American teachers than any other educational leader. No pedagogical books published in this country have been more widely read than those written by him, not even excepting Colonel Parker's "Talks on Teaching," and Page's "Theory and Practice." His textbooks have made his name known to several generations *of school* children.

Dr. Mowry's interesting series, giving glimpses of the development of professionalism among the teachers of the New England states, will be continued next month.

Several subscribers are under the impression that only original contributions are to be used in these pages. If it were possible to secure each month exactly the material needed to meet the demands of the course of study followed by EDUCATIONAL FOUNDATION, it might be well to depend wholly upon new matter. But the purpose is to furnish the *best,* whether it be new or old. If an article has already been published elsewhere, the subscriber has the double assurance that it is worth more than a single reading, and that his benefit will be all the greater by going over the contribution a second time.

It is extremely difficult at times to secure a satisfactory presentation of the problems proposed for the month in the various departments. Thus, when the editor wished to give something worth reading and re-reading, discussing and remembering, concerning the question of how to improve the work of inefficient teachers, he found that in the whole pedagogical literature published in English there was nothing quite so strong, so comprehensive, and practically helpful as a paper read by Mr. Frank A. Fitzpatrick before the International Education Congress, held at Chicago, in 1893. Articles that had been solicited from two leading school men did not compare in value with this paper, altho they were found sufficiently good to be used in another professional periodical having a purpose and scope different from that of this magazine. And what is more, Mr. Fitzpatrick's article as printed in EDUCATIONAL FOUNDATIONS, nine years after its first appearance in print, made its great value known for the first time to thousands who either were not present at the Congress or who used their reports of official proceedings of the N. E. A. merely for filling their library shelves, pressing flowers and leaves, or in other ways.

The first installment in the series of studies in the history and interpretation of art is presented in EDUCATIONAL FOUNDATIONS this month. The author suggested, in a letter received after his article had been typed, that asterisks be placed before the first two titles in his reference list of books for understanding the principles of art (p. 228), to indicate that they are recommended for purchase, while the other two books are suggested for reference reading only. To the latter books might have been added also "Architecture for General Readers," by H. Heathcote Statham (Charles Scribner's Sons).

For Pedagogic Discussion.

EPIGRAMS OF DR. EMERSON E. WHITE.

"All aimless teaching is poor teaching, whatever may be the teacher's zeal. It is better to have no aim than a wrong one."

"No teacher can grow in skill and power who has no means of testing his success as he advances. Teaching needs to be daily guided and tested by its ends, and the clearer the teacher's knowledge of these the higher his skill."

"The teacher needs to know before beginning an exercise whether its special end is knowledge or power or skill, and it is obvious that the more clearly this end is seen the wiser will be his plans, the more skilful their execution, and the more fruitful the results. The difference in end explains the difference in the two teaching processes called *instruction and drill.*"

School Administration.

The Morale of the School.

By Supt. C. B. Gilbert, Rochester, N. Y.

IN my last article I spoke of the occupation of the school-room as being the key to the entire school life, the first thing which the teacher must consider and the one thing which must be rightly conducted, if the school is to fulfil its function. I wish to speak at this time in particular of the conduct of children in school, its kind, the motives which should underlie it, and the observance of proper conventionalities.

There are many erroneous notions and much false preaching on the subject of what is called "school discipline," meaning the preservation of order. The great struggle with the majority of teachers is to keep order; more teachers fail in this respect than in any other and I verily believe that many of them fail largely because of their strenuous attempts to succeed in this one line as if, "Order being Heaven's first law," it were the one thing for which children come to school. The "discipline" of the school is in a manner separated from the work of the school and made a particular feature, and teachers boast of their success in keeping order, I think, with more pride than of their success in teaching.

There are few fundamental principles underlying this whole question of school "discipline" which it is well to study, altho they are not new. Conduct rests upon two classes of motives which in most of us are so inextricably mixed that we cannot distinguish one from the other. One is convention and the other the inner law of right recognizing rational motive for all conduct.

Now, convention is necessary to the smooth running of the social machine. People who must live together of of conduct, but one which fits the occasion. So in a school certain conventions are necessary. Teachers must be able to teach and children to study and recite without being disturbed by others. There are, moreover, conventions of a wider reach, those that belong to the business world as a whole or to the religious world as a whole.

Now, these conventions are not the mere fabrication of some ingenious people foisted upon the members of the organization or association, nor are they artificial, tho they may seem so. In the first instance they rest upon certain fundamental principles which are the basis of sound morality; these are the right of all people to perform any legitimate act without being interfered with unduly by others and the obligation resting upon all to respect that right in others. Such conventions not only rest upon sound principles, but they are absolutely necessary to the smooth running of the world's machinery.

Primarily the word morals means manners. Good morals are good manners or good methods of conduct in relation to other people and are based upon the obligation of all people to help all others and to make the world, in so far as possible, a desirable and pleasant place to live in and to facilitate all useful activity. Good table manners, for instance, are distinctly good morals, and bad table manners are bad morals as distinctly as are the grosser violations of what are commonly recognized as moral laws. Good manners make the world happier and better place to live in, and facilitate profitable and greeable intercourse among people and render easier e accomplishment of the world's work.

The man who steals does wrong, of course. He inter-
ith his neighbor's rights, but the man who by bad

wrong. He interferes with the rights of others to the pursuit of happiness and to that peace of mind which is necessary to accomplishing the best work. This is the moral basis for moral conventions and for all those regulations which, whether written or unwritten—more commonly the latter—are universally recognized as guides in the intercourse of human beings.

It is true that in school and in other places conventions sometimes become fetiches, the mere form of good conduct takes the place of the spirit of it, artificial Chesterfieldian manners are substituted for kindly interest in the well-being of others and for such conduct as makes it possible for others to do their work best, which constitute real good manners. When so substituted the moral element is lost. Such manners while sometimes desirable have no deep foundation, and it is to be borne in mind that all rules of conduct are valuable in so much as they further some worthy end. Consequently in school it is impossible to separate the conventions which make for the well-being and successful administration of the school from those rules of conduct which are supposed to make for character. These two are one, and in determining what kind of conduct should be required in school we need to go no further than to ascertain the purpose of the school.

If the purpose of the school is worthy and high the conduct that furthers it will make for good character. If the purpose of the school is not high and worthy and if conduct therein is supported merely by artificial conventions it is impossible to add any system of rules that will contribute to character building. Character is the result of the life lived and the life lived is one. There is altogether too great a tendency, especially in the fields of ethics and religion, to seek to separate that conduct which has to do with the common affairs of life from that which has to do with what is sometimes called the higher morality.

The life we live in pursuing the common necessary ends is both determined by and determines our characters. As I pointed out in the previous article it is impossible to separate character from occupation. It is what we do daily and continually when pursuing our vocations, when not thinking of moral questions that shows what we are and crystallizes conduct into character.

I have said that the school is a social organization; its end, I repeat, is social efficiency and whatever of moral training there is in a school must be in the life of the school and not in some extraneous system of instruction tacked on to its other employments. Hence in order to secure the proper moral training to children in school the school itself must be a proper institution. Its ends must be high and its occupation must be both noble and ennobling; they must so exercise the whole child that inevitably he is led into high living. The much misused term "discipline," in relation to school life, is a bogy, because teachers too commonly seek to separate the conduct of the school from its occupation.

In schools that are really disorderly the trouble is usually to be found in one or more of three common conditions: the character of the teacher, which may be either positively bad, merely weak and unimpressive, or ultra-sentimental; the character of the work required, which may be either upon a low plane or so presented to the children that they fail to see the good in it and to realize its worth; the enforcement of conventions resting upon no sound moral principle. The last mentioned has already been sufficiently considered.

As to the first, nothing need be said here, except for the sake of the ultra-sentimentalists who fail to recognize the necessity of any control in a school if the work is interesting. I have seen teachers with high ideals and really noble views of education fail utterly because of the lack of will or because they have not sought to impress themselves upon the school. An organization must have a head, and in all associations of people for a common end there must be some one directing, and as practically all associations contain some unfortunates with diseased wills, due frequently to bad training in early life, authority is needed either to control or to expel these makers of mischief. Even in the freest schools there must be felt the pervasive presence of the teacher. Such presence does not interfere with the development of the individual or the cultivation of self-control. It is simply necessary so as to secure social harmony. A teacher does not need to be a boss. Bossism is fatal to the higher ends of the school. But a teacher must have will and be able to exercise it vigorously tho wisely for the common good.

Perhaps here it is well to say something upon the subject of obedience, in order that what Imay say later may not be misunderstood. As I view it, obedience is not in itself a virtue, it may be a weak vice, but it is in almost all societies an occasional and often a continual necessity. In the school where the teacher is dealing with young and growing minds, obedience must be maintained ; in order that the essential conditions of a good school may be secured it is a preliminary necessity, a crutch to aid the weak until able to walk alone, but it should be used sparingly. The teacher should not require it for its own sake, but merely to secure necessary conditions and never when children can control themselves. It should always seek to lead to self-control and should gradually be dropped out of sight as the power of self-direction is secured, but it still must be potentially present and ready to be used in emergencies. Pupils must obey when it is necessary, *even* unquestioningly, but they should *never be called upon* to obey unquestioningly unless it is necessary, and such obedience should, in so far as possible, rest upon faith in the superior wisdom of the teacher. The business of the teacher is not merely to secure temporary conditions, but permanent conditions, and to so train the children to work for a motive that they can and will do this when the teacher's directing and controlling power is removed. In short, children must mind. It is natural to rebel against authority, when it is not exercised for any evident good motive and children are eminently natural. In the school in which there is an abundance of red tape, innumerable petty details of order and rigid enforcement of compliance thereto, there is always rebellion, at least potentially, and actually deceit and hypocrisy.

The natural tendency above mentioned prompts children to seek to subvert the will of the martinet disciplinarian, openly if they dare, by deception if they do not. Rigidly enforced rules without an evident, worthy reason back of them are fatal to character in those who are subject to them. A teacher should be very slow in making rules and should always ask before promulgating one, is this absolutely necessary to the well-being of this society? Could not the end aimed at be secured in some other way and can it be secured in this way ? for we must not forget that children should live in school a sane life for ends which appeal to them, to the end that they may lead such lives after they leave school.

I recall a school in a Western city which was famous for its discipline. The pupils always moved with machine-like uniformity ; everything was done beautifully so far as the eye could see ; silence was rigidly maintained ; all the petty conventions that ingenuity could devise were enforced with the method of the martinet and, like Katisha's shoulder, people came from miles around to see it. A change of administration brought to light the inner condition of the school. The moral sense of the pupils had been practically destroyed ; lying and whispering, having been treated with the same severity, came to be regarded by the pupils as equally heinous or venial crimes, and you may be sure the children leaned toward the veniality. It took some years of comparatively bad order to bring about a rational moral sense in that school.

As to the third point, it is not enough that the work of the school be on the whole wise and well planned. It must be so presented to the children that it will appeal to them as worth while; otherwise they will loose the best kind of moral training, which comes from working for worthy ends. Children who simply do what they are told, even if that is conventionally right, are not acquiring moral power. They must understand the motive, and if it is worthy be ready to make effort, to drudge, to sacrifice for it, if they are to receive sound moral training.

(To be continued.)

QUESTIONS.

1. What is meant by the discipline of a school?
2. What are the governing motives of conduct?
3. Cite and explain pedagogical reasons for the necessity of order in the school.
4. Enumerate and explain the reasons for the conventions essential to good work in school.
5. Discuss these statements by Superintendent Gilbert: "If the conventions of the school are essential to good work, obedience to them constitutes a training in morals; if they are not essential to good work in the school, insistence upon obedience to them means training in bad morals."
6. Discuss insistence upon silence in school.
7. Discuss the value of good manners as good morals. What problems grow out of this for the school?
8. "All rules of conduct are valuable insomuch as they further some worthy end." Discuss the application of this statement to school management.

Child Study.

Types and Temperament.

By John Adams, M.A., B.Sc., in *The Practical Teacher.*

FEW teachers believe in phrenology, but most teachers would like to. What lends this pseudo-science its dangerous charm is the promise it gives of an easy and natural classification of our pupils. Teachers of large classes proclaim that they cannot study the individual child. Yet, as they feel the need of some sort of study for their pupils, they seek a short cut. Teachers are not content with the vague abstraction "the child," and they have no time to study the individual; so they compromise by dealing with *types.*

Every teacher has noticed, after having several classes pass thru his hands, that there is a strange parallelism between one class and another. John Smith of the 1901 class irresistibly recalls Tom Brown of the 1900 class, or William Jones of the year before. Teachers interested in such matters sometimes amuse themselves by superimposing all the individuals of one class upon the shades of their predecessors. What serves for amusement may also serve for use. The study of types gives a real insight into the nature of the living children in our classes.

What the teacher feels about his class, thoughtful men have felt about their fellows, from the oldest times. The classification of men according to their temperaments goes back as far as Hippocrates and Galen. Their view was that the fundamental nature of a man depended upon the mixing in due proportions (*temperamentum*) of four fluids, all of which are present in some measure in all human bodies. If the blood predominated, we had *the sanguine* temperament, characterized by love of movement, vivacity, light-heartedness, hopefulness, rashness, impatience. If the bile predominated, we had the bilious or *choleric* temperament, marked by ambition, stubborndess, love of work, courage. If the lymph was in the ascendant, the temperament was labeled *lymphatic* or *phlegmatic.* Its characteristics are, slowness of movement, dullness, incapacity for sustained effort, gentleness, placidity, lack of fuss. The old physicians believed in the existence of a specially virulent form of bile, called black bile. If this got the upper hand, the temperament was known as the *atrabilious* or *melancholic,* of which the marks were, depression, sadness, darksidedness, reflectiveness, and humility.

The humors have long passed down that broad way that leads to the resting-place of hypotheses. But the facts they were invented to explain remain, and so excellent is the classification that it has held its own up to our own times. Not only has it found favor with psychologists like Wundt, but it has commended itself to idealists like Kant and Lotze.

A double antithesis adopted by Wundt is very useful in clearing our minds from the mere literal meanings of the four names of the temperaments. Soul movements, he says, may be considered under two categories—(1) the energy of the movements; (2) the rapidity with which the movements succeed each other. According to the first category, the four temperaments fall into two classes—the *Strong* (that is, the Choleric and the Melancholic), and the *Weak* (that is the sanguine and the Lymphatic). According to the second category, the movements also fall into two classes—those marked by *rapid* movements (that is, the Sanguine and the Choleric), and those marked by *slow* movements (that is the Melancholic and the Lymphatic).

However valuable these classifications are in themselves, many teachers want something much simpler for a working arrangement. Accordingly a simple double classification has been established, on the basis of the predominance of the sensory or motor functions of the organism. The child of motor temperament is marked by a very ready response to all stimuli. He is sometimes credited in books with a high degree of *motility*, which obviously means nothing more than that he has a strong tendency to let his energies discharge themselves in *deeds*. This is the kind of child that jumps at conclusions, and forthwith proceeds to act upon them. A child of strongly-marked motor type cannot help doing things, even when his teacher asks him merely to listen and consider. Knowing is for such a child only the vestibule of doing. The only use of knowledge is to suggest ways of acting.

The typical sensory child is content with receiving impressions, without at once responding to them or acting upon them. The inertia which marks this type frequently gives rise to a false impression of dullness. Such children are often slow at taking a hint, and are, generally speaking, slower at learning than the motors. Writers on this subject leave us with the impression that the sensory type is the higher of the two, and certainly the more intellectual. It is, therefore, hardly fair when one of the best-known of educational psychologists tempts us to discord by saying that, broadly speaking, girls are of the motor type. He soothes ruffled feelings by hinting that this difference between the sexes must be assumed to explain the relative dullness of boys at the earlier stages of education.

Perhaps the most scientific classification of the temperaments is that supplied by Alfred Fouillée. He combines the two classifications we have outlined. The Sensory and the Motor are each divided into two, and each of the four classes thus obtained corresponds to one of the four original types, as found in Hippocrates.

1. **Sensory**—with *prompt reaction*.........SANGUINE.
   Characteristics:—Pink complexion; skin in itself white; hair fair; eyes blue; neck short and broad; head round or squarish; nose big and strong.
2. **Sensory**—with *intense reaction*......MELANCHOLIC.
   Characteristics:—Complexion pale; physiognomy expressive and mobile; light sleepers; hair either colorless, or darkens with age; neck long and thin; nose thin with very mobile nostrils; body lithe, seldom fat; V-shaped face.
3. **Motor**—*prompt and intense*........ ......CHOLERIC.
   Characteristics:—Pale; olive or brownish skin; black and brilliant hair and eyes; body robust but dry.
4. **Motor**—*slow and not intense*.........PHLEGMATIC.
   Characteristics:—Fattish; neck short; big nose; complexion without much color, and no luster; hair sparse, fair or light brown; beard absent or little colored; eyes gray or green, without brilliancy.

This list of characteristics rouses as much envy as the phrenological heads that promise so much, if we could only believe in them. If we could but meet our class on the first morning with the list of characteristics in our hands, and V-shaped heads, what a saving of our time and temper. But we feel that all Fouillée's science will not save us from the weary round of bitter experience with those variously-tinted eyes and differently-shaped heads, before we discover their inner meaning. There is no doubt a real relation between all Fouillée's characteristics and the accompanying temperament, but, with our present knowledge, we cannot depend on details.

Some teachers do make much more out of such physical peculiarities than others. An experienced teacher, of much common sense, maintains that a great deal can be learned from the nature and arrangement of the hair on a boy's head. (This particular teacher has no girl pupils.) With a new class he spends a little time going round their backs, nominally examining their exercise books, but really investigating their hair. The texture of the hair has a meaning for him which he has never quite succeeded in explaining to other people; but his statement about the arrangement is clear and pointed. At the back part of the top of every boy's head is a spot that may be called the center, round which the hair is arranged. Not unfrequently it is marked—to the boy's disgust—by a few rebelliously upright hairs. This teacher maintains that if you come across a boy with two such centers—a not uncommon feature, he says—you must prepare for trouble.

No doubt this teacher is right in spite of our pity. He does learn a great deal from his quaint inspection. He learns, because he is interested and inspects at all. Just as this teacher learns many other things while he is looking for doubled centered boys, so we may learn many other things while trying to arrange our pupils according to Fouillée's characteristics. We may learn, for example, what temperament means; for up till now we have taken it for granted. There is a very common confusion between temperament and character. Now, temperament is a more fundamental thing than character; it conditions character; it is "given" in the problem of creating or modifying character. Temperament is "a foundation of tendencies which express the general manner of being of the organism, its mode of functioning, the tone, the value, and the direction of its vitality." It is the limitation placed upon mind or soul by the body. The teacher may use temperament for the best purposes or for the worst, but use it in some form he must.

It is sometimes said that we must aid our pupils to get the better of their original temperament. Here the word is loosely used, and is clearly confounded with the popular meaning of the word "temper," which, by a process familiar to those who study the history of words, has taken to itself an unpleasant suggestion of evil. To get rid of our temperament is as hopeless as it is undesirable. The child is not to be set free from his temperament; he is to be set free by it. It is the lever which the teacher must use in molding character.

By classifying his pupils according to the types of temperament, the teacher gets a working knowledge of the basis of child nature in general, and at the same time cannot fail to gather a great deal of valuable knowledge regarding individual pupils. The commonplace pupils naturally attract no attention, which is not to be regretted, since they may be properly treated on general principles gathered from the study of types; while the very fact that certain pupils cannot be conveniently classified singles them out, and thus saves the teacher from the danger of using his general principles where they do not apply.

QUESTIONS.

1. What pedagogical value attaches to the study of children as types?

Illustrate answer by examples.

2. (a) Explain the classification of men by temperaments.

(b) What are the characteristics of the various temperaments?

3. How does Wundt classify the temperaments? Explain his "double antithesis."

4. What is meant by a child of marked motor type?

5. Describe the sensory type of child.

6. (a) How does Fouillée classify the temperaments?

(b) Criticise his characterizations.

7. What dangers are there in drawing conclusions as to character from a study of physical characteristics?

Method of Teaching.

The Use of Pictures in Teaching.

By H. COURTHOPE BOWEN, M. A.

SO rapid is the increase in the use of pictures in schools and elsewhere that we run no small danger of dissipating and weakening, rather than concentrating and strengthening, our own powers and those of the children and others, unless we speedily and definitely make up our minds as to what it is that pictures can and what it is they cannot do for us. People seem to have suddenly become aware of a fact—which most careful students of the science of education recognized long ago—that, besides the language of oral and of written speech, there is a language of concrete things and of the pictures which represent them ; that this latter is commonly more definite, more complete as far as it goes, and more readily intelligible than the language which is spoken and written; and that, in particular, the attention and interest of the very young are more quickly aroused and more firmly held by things and pictures than by words. Long ago books were looked upon as almost the only means of education—books and the birch—and educating was interpreted to mean "putting a child to his book." Later, there came an inrush of oral teaching which threatened to drown out books altogether. And now many would have us put both books and oral teaching aside, while we flash pictures on the screen from the optic lantern. There is something very amateurish in all this. It lacks the characteristics of trained thought and ripened experience.

Before it can be wise—or indeed safe—to take decisive action in matters of such importance, it is first of all necessary to give a very careful consideration to at least three points:—(1) what do we understand by education and the acquisition of knowledge ; (2) what are the functions in relation to these proper to books, oral teaching, and pictures respectively; and (3) what are the best methods for giving these functions effective exercise? If we may assume—at least for our present purpose—that we have already come to a sound and deliberate opinion with regard to the first point, we cannot deceive ourselves with the idea that we have done much as yet to elucidate and determine the others. We are dissatisfied with book-teaching ; we are uneasy about oral teaching; and we are inclined to try picture-teaching. That is all.

Sound education depends upon our creating and maintaining harmonious and ever-active inter-relations between these three—the acquisition of knowledge, the development of power, and the production of skill; the soundness of each one depending on the soundness of the other two and its intimate relation to them. The processes necessary for effecting each of these three aims may be classed under similar heads: taking-in, assimilating or bringing into right relations, and giving-out or expressing. And here again the value and soundness of the result in each case depends upon our creating and maintaining harmonious and active inter-relations between the three kinds of processes ; and in particular the acquisition of knowledge depends upon the right taking-in of facts, the right bringing of them into relations with one another, and the right giving-out or use of them in expressive exercises—upon all these, and the keeping of all these in close and natural relations each with the others. Mere information, or an accumulation of isolated facts, is not knowledge. Knowledge is information taken in and assimilated—placed in its right relations to what the taker-in has already thoroly made his own. Information becomes knowledge when we have thoroly mastered its meaning, when we have realized its bearings on other facts and things and their bearings on it, when we understand it in such a way as to be able to put it to its simple natural uses. You will not be able to make a small set of facts knowledge for the pupil if they have no connection with what he has already acquired and none with what he is soon to acquire hereafter. In education as a whole, and in every part of education, creativeness (or exercise in expression), inter-connectedness, and self-activity are fundamental necessities. That is my faith.

I will begin by marking a distinction, too often ignored by teachers—the distinction, I mean, between object-teaching and picture-teaching. Object lessons are, or should be, exercises in sense-impressions—in all the sense-impressions which the object can produce—in order to perfect these, to co-ordinate them, and to enable them to interpret and complete one another. Later on, in addition to the perfecting and co-ordinating of sense-impressions, we may endeavor to exercise the mind in rising above sense-impressions into higher modes of activity—comparison, abstraction, judgment, inference, imagination, etc., or in short, the formation of ideas—but always in the presence of sense-impressions and with constant direct reference to them. The object should be made to appeal to as many senses as it can, and in many and varied aspects, and it should be accessible to experiment. Moreover, when the object is a plant or animal, it is largely the living thing and its life that we have to observe, at any rate at first; tho, of course, the habitual surroundings and mode of life can be effectively shown by pictures. These few conditions for effective object-teaching may be sufficient to recall to your minds how very few of the needful conditions pictures can satisfy in the earlier stages of work of this kind, which is best described as the informal beginning of science. Indeed, pictures are too advanced for such a purpose. For their *clear understanding* they pre-suppose a considerable amount of sense-experience and of what I may call sense-information, besides a very fair degree of development of the imagination. They pre-suppose what we want to produce.

Pictures are descriptions, appeal only to the eye, and speak in a symbolic language of form and color, only clearly intelligible after much experience of things similar to those which they represent. Of course, from the very first, lessons in language and in narrative are greatly helped by pictures; but such lessons, tho connected with object-lessons, are distinct from them in aim —just as information-lessons are—and should be recognized to be so. There is no fault more fatal in a lesson than confusion of aim or, what generally comes to the same thing, too great a multiplicity of aims. When exercise of observation is our aim, and children are busy at it and interested in what they are doing, it is not the time to worry them unduly with the making of formal complete statements. Such a demand at such a time is contrary to our own practice, and is likely to stop the self-activity of the observer.

Books and Pictures in School Work.

Let us note the differences in educational function between written language and pictures. Written language is, in the main, the record of thought and experience. Its statements consist of words, some of which must always be the signs of ideas; and the meanings of the words are learned thru association. Unless the concepts involved in the ideas have been properly formed from the percepts in which they take their rise, and properly associated with the words or written signs which stand for them, the statements will either not be understood or only partly understood. Ideas are formed from our perceptions of the relations of things, of their qualities, etc., and are by their very nature generalizations. Hence a predominant tendency of language is to generalize. Even when we are describing a particular object, tho the relations which we make prominent are relations of a particular unknown object to other particular known objects yet, as Prof. Lloyd Morgan has pointed out, the language we employ is so full of general import that the description may be, and usually is, set in a background of conceptions or generalized conceptual thought—at any rate, for adults. It is to this tendency and to the fact that words are liable to bring with them many and varying associations that we must attribute the fact that even the best verbal descriptions of places are indefinite, indistinct, and disconnected—hard to translate into mental or graphic pictures. We want what is perceptual and particular; and language tends to the conceptual and general. We want the features presented simultaneously and in their natural proportions and relations; and language presents them to us in succession, and shadowed forth by comparisons which often bring in far more than was intended.

On the other hand, if language generalizes, pictures particularize. They show a particular thing in a particular aspect, concentrate attention on particular points or points of view, exhibit the parts of the thing (or, at least, many of them) simultaneously and as nearly as possible in their actual relations and, unless the draughtsman bungles, the information they give is definite and distinct. They are admirable for exhibiting the habitual surroundings of a plant or an animal. It is evident, therefore, that for purposes of description—when this is meant to convey information to the intellect rather than to stir the emotions—pictures are more potent than language.

You are aware that Cæsar is noted for his lucid and exact descriptions. In one place he describes the making of a bridge in great detail. The passage is not a favorite with boys; but it was, and still is, I believe, a favorite with those strange people, examiners. It certainly was puzzling. But a thoughtful German, instead of adding learned notes to the passage, supplied a picture of the bridge, numbering and naming the parts. Everything grew clear, connected, and easy to remember. "The time will come," said Thring, on my calling his attention to the point, "when most of our learned notes will be swept out of the books, and pictures put in their places." Or take the same thing from another point of view. We want to ascertain whether a pupil knows a particular plant or flower. He may give us a list of stamens, carpels, etc., and still we may be doubtful whether he would recognize the flower or plant if he saw it. If we demand and get a drawing, our doubts will vanish at once.

Of course, there are descriptions—of mental processes and states, mathematical processes and the like—wherein pictures can give little or no help. I shall say nothing specially about diagrams; because either, as in geometry, they differ in no important way from other pictures, or, as in physics, they are merely special forms of written language.

I have spoken of written language as the record of thought and experience. It is when we are recording experience and imparting it to others that we use descriptions. But as soon as thought is applied to these experiences, past or present, we immediately encounter the familiar "Why?" Why are these things such as they are described to be? In other words, there is a demand for explanation. We explain a fact or thing by showing its relations of likeness and unlikeness to other facts or things. The botanist explains a new plant by placing it in its right group of other plants. We explain a natural phenomenon by bringing it under some general law which is found to be usually true in nature. Or, briefly, we explain the particular by showing its relation to the general. This often enough does not take us very far; but it is what we mean by explanation. The element of generalization, in a lower or higher form, is inseparable from it—just as the element of perception is inseparable from description. From what I have just said of the nature and tendencies of language, it will be seen at once that in explanation the predominant factor is language. Pictures may sometimes help if the generalization employed is of a very low order; but more often they will only increase our difficulties by introducing characteristics not under consideration, especially when the generalization is of a high order. For instance, supposing the generalization were "quadruped"—which is hardly a generalization at all—then the particular thing to be explained, or its picture, would be introduced with great advantage. But, if we were explaining why it is that a balloon rises into the air, after the balloon has been properly observed and described the introduction of its picture (and, still more, of itself) would be the reverse of an advantage. We may put very much the same thing in a slightly different way. If the things in a class, or covered by a generalization, are alike in almost every noticeable point, a picture of the thing to be explained will be useful; but, if the like points are few, or not very obvious, and the individual differences many, it will not. This, of course, is on the supposition that the work of observation has already been properly done. The natural and logical order is observation, description, explanation; and corresponding to these our respective special needs seem to me to be things, pictures, language —tho, of course, language will be used in every stage, while pictures (if not too full of detail), by concentrating attention on particular points, or points of view, will often be of great help to observation. When our aim is mainly to form mental pictures, we should rely mainly on things and graphic pictures; when it is to form ideas, we should rely upon language.

Oral Teaching and Pictures.

Oral teaching differs in many ways from teaching by means of books. To begin with, the effect of the spoken word is more evanescent; one cannot, as with written language, go back and ponder over the words and the statement and, having made sure of the meaning, proceed at our own pace. If the meaning is not caught when the statement is made, we are likely to miss it altogether. In description, spoken language is even less able than written language to present all parts of the object simultaneously and in their relative positions; and to some the very sound of the voice is a disturbance to thought. Moreover, it only appeals to one sense, that of hearing—a much less reliable means of information than sight, to which pictures appeal—while written language also derives some advantage from speaking to the eye, tho for the young it is apt to be weak in stimulating self-activity. On the other hand, speech is more flexible. We can change, and twist, and add to what we say, and say the same thing again and again—compelling renewed attention to it—in a manner which would be intolerable in written language. Moreover, the look in the face, the tone, the gesture of the teacher, give a meaning and an emphasis to what is said which written words can never give. And, above all, it is only in oral teaching that we can have that constant interplay bstween the minds of the teacher and the pupil which is the very soul and essence of true teaching.

In written language one tends to think more of the subject than of the child, or to address only the vague generalization of a child. In oral teaching one is drawn to think of the child first and the subject second, and to adapt the subject to the child. The spoken word, too, more readily excites curiosity and interest, and a sympathetic manner nerves the pupil to renewed effort. It is far easier to stir the emotions by speech than by writing. There is, however, always this danger, that the teacher may do all the talking while the child sits passive and listens. It will be seen then that, to my mind, speech, thru its liability to disconnectedness of effect, its tendency to produce impressions somewhat indefinite and indistinct, and thru its appealing to an organ of sense less helpful to the memory than sight, is less valuable than written language for conveying information which should be accurate, clear, well defined, and connected; while for working up information into knowledge, for assimilation, that is, and for stirring, stimulating, and directing feeling and effort, and producing self-activity, speech is our most valuable educational means. It is clear to me that we need both books and oral teaching; and that the place of neither can be taken by pictures.

But how can pictures help our oral teaching? To begin with, in very much the same way as they can help our book-work, while we can use them with somewhat greater freedom, seeing that by word of mouth we can readily modify and correct the information they give and the impressions they produce. But let us be on our guard against an intemperate indulgence in pictures—visual dissipation, as I may call it—and bear in mind that showing a number of pictures simultaneously or in rapid succession produces not definiteness and distinctness, but confusion, and tends, even where the choice is carefully made, to emphasize the production of a succession of striking incidents, rather than a continuous and connected narrative. This last effect may, of course, at times be exactly what we desire; but let us at least be sure that we do desire it. The pictures presented have to be questioned out. Let us see that they readily lend themselves to the right questions and answers, inquiries and suggestions. Their function is to describe mainly by recalling past experience in new combinations. Let us see that they are fitted to do this for the pupils in question, and are distinctly visible and indicate the right proportions.

There is no commoner error than to suppose that a child must understand any picture placed before him. We might just as well suppose that he must understand any statement made to him. In both cases his understanding depends mainly on his past experience and his power to use it in interpreting what is new. On the other hand, a picture may itself be the subject of our oral lesson; the understanding and the appreciating of it, our aims. Then, indeed, its effect is all in the direction of connectedness; and if all of it be not shown at once, or if some of the details be sketched separately on a somewhat larger scale, the interest created seldom fails to be considerable. And, further, a picture may often supply —what teachers are too frequently given to omitting or slurring over—the best of introductions to a lesson. It will strike the right keynote, rouse the right kind of curiosity and interest, and turn them in the right direction. So, too, it may at times supply the most striking and memorable conclusion to a lesson—focusing all the rays of interest upon a central figure, a place, or an incident, and so helping the memory by a strong association—a plan far too seldom employed, and certainly very valuable in the early and middle stages of history teaching.

Such are some of the ways in which pictures can help us when using oral language and written language. They are so useful in enabling us to bring in and exhibit what otherwise is not portable, in enabling us to record and show side by side the various stages in a set of changes, to exhibit objects or parts of them on a magnified scale, and in the other ways mentioned, and are so interesting in themselves that I feel bound to warn you once more against too lavish an introduction of them, lest you dissipate and distract, rather than strengthen and concentrate, attention. When you use pictures to draw attention to and emphasize a particular point, be sure that this point is the most striking feature of the picture you introduce, or at any rate that it is prominent enough to attract minds already prepared to look out for it. There should be no predominant other attraction. Like good literature notes, they should not draw attention to themselves, but rather focus the attention more intelligently on the text. Lastly, remember when using picture speech, just as when using verbal speech, to use only that which is clearly intelligible to your pupils. You will only ascertain this by observing what attracts and holds a child's attention most in a picture, how pictures speak to children, and how children themselves use drawing to express their own mental images and ideas. You will not need to reproduce their oddities and mistakes, any more than you reproduce their baby words or misunderstood epithets; but you must understand what lies behind the oddities and mistakes if you wish to speak to them thru pictures with best effect.

I have referred but passingly to the emotional effect of pictures. To treat this subject fully would take me too far afield. I would, however, remind you of the marked advance of opinion in this matter of late years among teachers and the public. In very many classrooms now pictures of real beauty and permanent interest are taking the place of the depressing ugliness which used to hang on the walls. No one who knows children can have any doubt as to the esthetic, moral, and intellectual benefit of the change. I need not elaborate this view. As Browning makes Fra Lippo Lippi say,

> We're made so that we love
> First when we see them painted, things we have passed
> *Perhaps a hundred* times nor cared to see.

—and this is true of feelings and ideas, as well as of things. The artist brings the object or scene or action before us without the disturbing causes and obstructions which would accompany it in every-day life, makes what feature he will specially distinct, and adds a touch of his own idealizing love or wonder, and straightway we see the thing, and feel it. One cannot be mean or impure in the conscious presence of some pictures ; nor can one be really quite happy in the conscious presence of ugliness.

USE OF PICTURES IN GEOGRAPHY, HISTORY, AND LITERATURE.

What should be our aim in teaching geography? Our first task, it seems to me, is to enable our pupils to gain all the personal experience they can from their actual surroundings ; and then for what lies outside these to give them the best substitute we can for personal experience. From the facts they have seen and know we should enable them to form clear mental pictures of countries they have not seen, the physical features and climate, the plants, trees, and animals, the human inhabitants and their occupations and means of intercommunication, and how they are affected by their physical surroundings and in turn themselves affect those surroundings. When imagining, the mind does not create new material ; its creativeness lies in new combinations and constructions. Out of the stock of material previously acquired, or still in process of acquisition, the mind selects what it wants for its purpose, and, changing nothing but position, size, proportion, and the like, recombines what it has selected so as to make new wholes. Evidently there must be a guiding purpose in the selection, preconceived or newly suggested ; and this necessary guidance may be afforded by verbal descriptions of the most marked characteristics of the desired construction, and still better by presenting visibly—and when possible in solid concrete form—a type or types of that construction.

Two things, therefore, have to be provided: (a) the material to be used; and (b) the type or rough model. For both of these pictures are of the greatest value. As much of the material as possible should be gained by personal experience; not only because in this way it becomes far more truly the possession of the worker, but also because without the personal experience the models to be presented may not be completely intelligible, the language used will not convey vivid clear-cut images, and the maps—when the time comes for using them—will fail to reveal their true meaning. But the personal surroundings may not give all that is needed; if we live in a flat country, there may be nothing to suggest mountains. We must supplement, therefore, what is locally obtainable by constructing what is further wanted in clay and sand, by pictures and by verbal descriptions. If the pictures are photographs of the actual features described, so much the better.

As to the type or model to suggest and aid the desired construction—undoubtedly the best is a raised putty model of the district to be imagined; and in this minute accuracy of detail need not be attempted. Indeed, if we put in too much, and worry about details, we defeat our own aim. To this should be added photographs of typical parts of the district—to be shown when the model is being examined. We should want also photographs of typical industries and of a typical village and town, and for a foreign country we should need, too, photographs of the inhabitants, and of the plants, trees, and animals. When all this has been gone thru, and we have added some geological information as to the surface and what lies immediately beneath it, then, and to my mind not till then, should come the map—to draw our information into right positions and to record what has been learned. Maps give us relative positions, relative distances, and *relative* areas; and they would do this far more effectively were they provided (especially as regards area) with definite really known standards of comparison—a vague standard unrealizable by the pupils will not help them. Of course a really good geological survey map tells a geographical expert far more than I have indicated; but even such a map will not help a child much when forming mental pictures, until by other means he has gained some acquaintance with the details.

But how are we to rouse and maintain our pupils' interest so as to induce them to construct the mental pictures? Chiefly by placing living beings in the district; by connecting it with history and romance. Children do not care much for the beauties of landscape; and for all of us the main interest of a locality lies in the fact that human beings have lived and acted, suffered and been happy in it—especially when we can trace and understand the influence of the living beings on the locality, and of the locality on the living beings. What is contemporary, if it is sufficiently striking, will be best; but history and travels will also be of use to us, and so will fiction. Pictures will greatly help us in this.

Lastly, if my plan is a right one, then the line of advance in geography will be the line along which it is easiest for the imagination to travel, *i. e.*, from one country or district to another which, of those we mean to study, it is next easiest to imagine; tho, of course, we shall not necessarily finish everything about one country or district before going on to another.

The use of pictures for history teaching is, in many ways, akin to their use for geography; but we have to be very much more careful to avoid an intemperate display of them, lest the thread of our argument or narrative be too frequently broken. Even in an ordinary novel, to have too many pictures is a great interruption. I am wont to divide the teaching of history in schools into three stages. I take the same period for each; but, in the first stage, I touch upon only the main events and main personages, treating them with regard to action, personal adventure, personal characteristics. In the second stage, we have the same period with secondary as well as main events and personages, and I introduce references to causes and consequences of events—the individual is merged in his class. In the third stage, we have the same period again in more detail, the nation being treated as a whole, while frequent reference is made to constitutional matters, to relations with foreign nations, and to general social growth. If I could possibly manage it, I would have a fourth stage—treated on the lines of the second, but dealing with only the main events and personages of European history. If these stages were adopted, then pictures would be useful, mainly in the first and second; while, in the third stage, they would be chiefly used in the introduction and conclusions of lessons, in the manner I have already indicated. I would never, in any one lesson, use more than two or three pictures, unless, indeed, it were to explain some technical term or single object mentioned, when the picture can be shown very briefly. The kinds of pictures we shall want seem to me to be the following: Incidents on famous occasions, famous people, employments and ceremonies, implements, coins, plans of places and battles, dwelling-houses and rooms, public buildings, dress.

In literature, pictures will be found useful chiefly as graphic representation, that is, as the means employed by our pupils themselves for translating word-speech into form-speech. They may be used in introductions (to strike the right keynote or suggest the scene) and in conclusions. In the latter case it is frequently an excellent plan, after a poem has been carefully studied, to present an illustration of the whole or part of it, and then to lead the pupils to discuss and criticise the illustration. Pictures, too, may sometimes be used, as in some dictionaries, to graphically explain hard terms and obsolete objects, and at times we may use them to exhibit the place or scenery in or amidst which the action occurs, but only, I think, when the place or scenery has a real intimate bearing on the action. Often a poem needs a vague background for its proper effect. As to the persons introduced, I should say that it is generally best to leave them to the imaginations of our pupils, except, perhaps, when these persons are historical and are treated as such. Personally, the illustrative picturings of heroes and heroines are wont to cause me more annoyance than pleasure. The artist seems to thrust himself between me and the author, and to dictate what I shall imagine; and one's feelings about one's heroes and heroines are often too intimate and personal for one to suffer this gladly.

I have not exhausted my subject. I trust, however, that I have at least shown that there are parts of our school work for which pictures can be used with great effect; that whether this effect is helpful or hurtful depends upon the teacher's having a definite aim and understanding how pictures speak to us; that we cannot rely upon pictures alone; and that at all times we must use them with a wise moderation.

QUESTIONS.

1. What is included in the object of education?

2. (a) What place does the acquisition of knowledge take in the plan of education?

(b) Upon what does this acquisition depend?

3. What is meant (a) by knowledge? (b) by information? (c) What relation has one to the other? [Illustrate the difference and relationship by examples.]

4. (a) What are object lessons?

(b) Their objects?

5. Distinguish between object teaching and picture teaching. [Illustrate by examples.]

6. Enumerate chief conditions for effective object teaching.

7. What does a clear understanding of pictures presuppose?

8. What are the essentials of a satisfactory lesson?

9. Explain the difficulty of translating verbal description into mental or graphic pictures. Illustrate your answer.

10. What are the chief differences between teaching by word and teaching by picture?

11. Under what conditions are (a) pictures more potent than language? (b) language more potent than pictures? (c) Explain and illustrate.

12. How are facts explained to a learner?

13. Under what conditions is the introduction of pictures positively harmful to a firm grasp of a new truth?

14. Give a general rule stating when to rely in teaching mainly on things and pictures and when upon language.

15. Describe the peculiar advantages of oral teaching and show also its limitations.

16. How do pictures help out oral teaching? Explain and illustrate.

17. What does Mr. Bowen mean by "visual dissipation" in teaching? Indicate its consequences.

18. What demands must we be able to make upon pictures to test their value as means of instruction?

19. Describe the various uses of pictures in teaching.

20. Give rules to be observed in studying a picture.

21. What cautions must be observed in using picture speech?

22. What illustrational material is best suited for geography teaching? Why?

23. What rules would you suggest with reference to the use of pictures (a) in history teaching? (b) in literature?

24. Illustrate how pictures may be helpfully used in literature teaching.

The Art of the World.

Studies of the Art of Historical Periods.

By GEORGE SAWYER KELLOGG, Columbia University.

"That the beauty of life is a thing of no moment, I suppose few people would venture to assert, and yet most civilized people act as if it were of none, and in so doing are wronging both themselves and those that are to come after them; for that beauty, which is what is meant by art, using the word in its widest sense, is, I contend, no mere accident to human life, which people can take or leave as they choose, but a positive necessity of life, if we are to live as nature meant us to; that is, unless we are content to be less than men."—WILLIAM MORRIS, in "Hopes and Fears for Art."

[The course of lectures on the History and Interpretation of Art, given in the Summer Session of Columbia university during the past two summers, was the means of developing such a deep interest in the Art of the great historical periods, and led to so many enquiries regarding reference readings, that the more important features of the lectures, with the reference readings, will be given monthly in EDUCATIONAL FOUNDATIONS.

In each study of the series, there will be given a list of the more important books and articles for reference readings, including, in addition to the title and author, the publisher, for convenience to those who desire to have them added to the reference shelves of their local library. The accompanying list of books will be used for reference for the entire series of studies, and those who purchase them will have the opportunity to make far greater progress than is possible without their additional help; they are inclusive of the art of all periods and each is the leading work of its class, especially for teachers.]

What is Art?

All Art is one continuous expression of the highest thought of man, from the crude work of the savage, in decorating his weapons and utensils, to the sublime creations of Phidias or Michelangelo; a language, in which, by means of line, color, and form he has recorded not only his aspirations and ideals but reflected in his work the very life of his time; as on the walls of the Assyrian palaces, where the king had his battle-scenes represented, being the illustrated histories of that time, while in the Medieval period, the cathedral with its countless sculptures, became the only illustrated Bible accessible to the people.

A very important distinction has been brought out by Godfrey Blount, when he says: " Art is the language and the expression of the heart, as opposed to the intellect. If it is a literature we must take care that it is not literary. It is a total misconception of the first use and purpose of Art to think of it as merely a convenient adjunct to a written description, for its peculiar quality as distinct from literature lies in the fact that its message cannot be written in any other words than its own. It may illustrate the same feeling or the same fact as an accompanying text describes, but it must illustrate it from an entirely different point of view and must be able to stand by itself as a work of Art, quite independent of the letter-press. * * * * Its greatest triumph is to create a harmony out of the infinite and subtle discords of nature as each age apprehends them."

The necessity for understanding and appreciating the principles underlying all true art expression cannot be better stated than by saying that the application of the principles of Art should be included in every article we make or construct, from the child's written sheet of exercises in the school, to the entire public school structure in all its phases; from the exterior design, to the tinting on its class-room walls.

Characteristics of Great Art.

Let us consider for a moment the fundamental characteristics of great Art. Its most important quality is simplicity of treatment; it is self-interpretative; it needs no label or title to emphasize its meaning. An Athenian school-boy, as he walked out of the Dipylon Gate of Athens into the Ceramicus Cemetery, needed no inscription on the Hegeso Grave Relief to tell him that the seated young woman who is taking some precious ornament from a little box brought by her maid-servant is looking at her earthly treasures for the last time, thus symbolizing the sad farewell before the final journey. No example illustrates this principle to greater advantage than the "Nathan Hale," by Frederick MacMonnies, in City Hall park, New York. It tells its own story silently, but nevertheless with irresistible power, to every passer by; first, the fundamental truth that a man has sacrificed his life for a great cause, his country, and has become by the act a martyr; and if one is ignorant of his name, as are thousands of foreigners who pass by on that crowded thorofare, the inscription, with Nathan Hale's immortal words, "I only regret that I have but one life to lose for my country," gives the necessary historical information.

Necessity for Teaching Art.

The necessity for teaching the principles underlying art was never as fully realized as it is to-day; but the far-reaching results of such teaching are not yet fully comprehended.

The only hope we can have for the preservation of our scenery, that it shall not be disfigured by huge advertising signs, as is the Dunderberg at the Southern Gate of the Hudson Highlands, is by Art teaching in the public schools; not simply teaching drawing and water-color work, important as they are, but teaching the eternal value of the beautiful, the principles underlying all art expression in the broadest possible spirit; teaching that all natural scenery is to be reverenced and not unnecessarily disfigured or destroyed; that if a structure is to be erected it should harmonize with its surroundings, if possible, and combine the dignity of Architecture with the beauty of Nature. A notable example of successfully carrying out *this principle* is the Cosmopolitan building at Irvington-on-the-Hudson, a very rare example of a commercial structure which is not a detraction to the landscape as seen from the river.

William Ordway Partridge, the American sculptor, has said, "Art is a personal matter; it is like the atmosphere all about us. We make or mar it unwittingly, every day and hour."

Its Never-ending Message.

Hamilton W. Mabie has said in his essay on Dante, that all minds of the highest order are never at any time completely understood, and that with every change of conditions in the world their message is re-illumined. So with all the greatest art of the world, from that colossal face which has gazed toward the rising sun at Gizeh for more than five thousand years, to those incomparable forms of the Hebrew Prophets in the Boston library,—their message to mankind will never be completed; each generation will look on them with new eyes and re-interpret the soul that is within them.

REFERENCE BOOKS FOR UNDERSTANDING THE PRINCIPLES OF ART.

"The Fine Arts," by G. Baldwin Brown. Charles Scribner's Sons, N. Y.

"The Philosophy of the Beautiful," by Dr. William Knight. Charles Scribner's Sons, N. Y.

"Hopes and Fears for Art," by William Morris. Roberts Bros, Boston.

"The Principles of Constructive Design," by Henry Turner Bailey. In Year Book of the Council of Supervisors of the Manual Arts—Dec., 1901—Published by the Council.

REFERENCE BOOKS FOR THE HISTORY OF ART.

"History of Architecture on the Comparative Method," by Banister Fletcher, Fourth Edition, Revised. Charles Scribner's Sons, N. Y.

"History of Sculpture," by Marquand and Frothingham. Longmans, Green & Co., N. Y.

"The World's Painters," by Miss D. L. Hoyt. Ginn & Co., Boston and New York.

Pedagogical Classics.

Jean Paul Richter's "Levana."

Extracts from Jean Paul Friedrich Richter's "Levana; or The Doctrine of Education."

WHEN Antipater demanded fifty children as hostages from the Spartans, they offered him, in their stead, a hundred men of distinction; unlike ordinary educators, who precisely reverse the offering. The Spartans thought rightly and nobly. In the world of childhood all posterity stands before us, upon which we, like Moses upon the promised land, may only gaze, but not enter. . . . If there were a perfect and all-powerful system of education and a unity of educators with themselves and with one another; then, since each generation of children begins the history of the world anew, the immediate, and thru it the distant future, in which we can now gaze and grasp so little, would stand much more fairly in our power. For deeds and books—the means by which we have hitherto been able to work upon the world—always find it already defined and hardened and full of people like ourselves; only by education can we sow upon a pure, soft soil the seeds of poison or of honey-bearing flowers; and as the gods to the first men, so do we, physical and spiritual giants to children, descend to these little ones, and form them to be great or small.

It is a touching and a mighty thought that now before their educator, the great spirits and teachers of our immediate posterity creep, as the sucklings of his milk-store—that he guides future suns, like little wandering stars, in his leading-strings. And it is all the more important because he can neither know whether he has before him, to unfold to good or evil, a hell-god for humanity, or a protecting and light-giving angel; nor can foresee at what dangerous moment of futurity the magician, who, transformed into a little child, now plays before him, will rise up a giant.

. . Do you know whether the little boy who plucks flowers at your side may not one day, from his island Corsica, descend as a war-god into a stormy universe, to play with storms and to destroy, or to purify and to sow? Would it then be indifferent whether, in educating him, you had been his Fénélon, his Cornelia, or his Dubois? For altho you might not be able to break or bend the power of genius—the deeper the sea, the more precipitous the coast; yet in the most important initiatory decade of life, in the first, at the opening dawn of all feelings, you might surround and overlay the slumbering lion energies with all the tender habits of a gentle heart and all the bands of love. Whether an angel or a devil educate that great genius is of far more importance than whether a learned doctor or a Charles the Simple teach him.

. . Let a child be more holy to you than the present which consists of things and matured men. By means of the child—altho with difficulty—by means of the short lever arm of humanity, you set in motion the long one, whose mighty arc you can scarcely define in the height and depth of time. But there is something else you certainly know; namely, that the moral development—which is education, as the intellectual is instruction—knows and fears no time nor futurity. In this you give to the child a heaven with a pole-star, which may ever guide him in whatever new countries he may afterwards reach.

. . The Romans had Grecian slaves for their schoolmasters, and yet their children became neither Greeks nor slaves. . . . Where do the children more resemble the parents—and to anything else than a mirror of himself, be it a flat, a concave, or a convex one, the teacher cannot wish to mold and polish his pupil—than even in those places where the educators are silent, among savages, Greenlanders, and Quakers?

And the further one looks back thru past ages to the hoary nations of antiquity, the fewer school books and Cyropedias—in fact, from want of all books—were there: all the more was the man lost in the state; all the less was the woman, who might have educated, formed for it: nevertheless, every child was the image of its parents, which is more than the best ought to desire—since God can only behold his own image in men as a caricature. And are not our present improved educational institutions a proof that men can raise themselves freely and without aid from bad to better, and, consequently, to all other establishments of a similar kind?

But who, then, educates in nations and ages?—Both!—The living time, which for twenty or thirty years struggles unceasingly with men thru actions and opinions, tossing them to and fro as with a sea of waves, must soon wash away or cover the precipitate of the short school years in which only one man, and only words taught. The century is the spiritual climate of man, mere education the hothouse and forcing pit, out of which he is taken and planted forever in the other. By century is here meant the real century, which may as often truly consist of ten years as of ten thousand, and which is dated, like religious eras, only from great men.

What can insulated words do against living present action? The present has for new deeds also new words; the teacher has only dead languages for the, to all appearance, dead bodies of his examples.

The educator has himself been educated and is already possessed, even without his knowledge, by the spirit of the age, which he asiduously labors to banish out of the youth (as a whole city criticises the spirit of the whole city). Only, alas! every one believes himself to stand so precisely and accurately in the zenith of the universe, that, according to his calculation, all suns and nations must culminate over his head; and he himself, like the countries at the equator, cast no shadow save into himself alone. . . . However easily blooming every man may open towards the sky, he is yet drawn down by a root into the dark, firm earth.

POWER OF REPETITION.

The spirit of the nation and of the age decides and is at once the schoolmaster and the school; for it seizes on the pupil to form him with two vigorous hands and powers; with the living lesson of action, and with its unalterable unity. If—to begin with unity—education must be, like the Testament, a continuous endeavor to withdraw the force of interrupting mixtures, then nothing builds up so strong as the present, which ceases not for a moment and eternally repeats itself; and which, with joy and sorrow, with towns and books, with friends and enemies—in short, with thousand-handed life, presses and seizes on us.

. . Repetition is the mother not only of study but also of education. Like the fresco painter, the teacher lays colors on the wet plaster which ever fade away, and which he must ever renew until they remain and brightly shine.

. . Certainly one might say that also in families there educates, besides the popular masses, a pedagogic crowd of people; at least, for instance, aunts, grandfathers, grandmothers, father, mother, godparents, friends of the family, the yearly domestics, and at the end of all, the instructor beckons with his forefinger, so that—could this force continue as long as it would gladly be maintained—a child, under these many masters, would resemble, much more than one thinks, an Indian slave who wanders about with the inburnt stamps of his various masters. But how does the multitude disappear compared with the higher one by which it was colored; just as all the burnt marks of the slave yet cannot overcome the hot black coloring of the sun, but receive it as a coat of arms in a sable field!

POWER OF LIVING ACTION.

The second mighty power by which the spirit of the age and people teaches and conquers is the living action. Not the cry, says a Chinese author, but the rising of a wild duck impels the flock to follow him in upward flight. . . . Ah! most respected teachers, if even we, with our great college libraries that preach to us for tens of years, have never once been brought so far as to become holy men for a month, nay for a week, what dare we expect from the few volumes of words which we let fall in school hours? Or what more should the parents at home expect?

. . Since we have asked whether a man may be more effectually moved by a thousand outward foreign words than by a billion of his own inward ones, let us not be very much astonished if the stream of words which is given to the youth, in order that he may thereby guide and bear himself up in the ocean, should be dissipated by the winds and waves on every side. But give us leave to remark that we lay many things to the account of school-rooms, that is, of words, which have in fact had their sole origin on the common teaching-ground of action; just as, in former times, the general pestilences were ascribed to the poisoning of particular wells by the Jews. The school-house of the young soul does not merely consist of lecture and lesson rooms, but also of the school ground, the sleeping room, the eating room, the play-ground, the staircase, and of every place. Heaven! what intermixture of other influences, always either to the advantage or prejudice of education! The physical growth of the pupil nourishes and draws forth a mental one! Nevertheless, this is ascribed to the pedagogic tan-bed; just as if one must not necessarily grow cleverer and taller at the same time! One might quite as properly attribute the service of the muscles to the leading-strings. Parents very often in their own children regard that as the effect of educational care and attention which in strangers they would merely consider the consequence of human growth. There are so many illusions! If a great man have gone thru any one educational establishment, he is ever after explained by that: either he did not resemble it, and then it is held to have been a molding counter-irritation; or he did, and then it acted as an incitement to life.

. . We may, excellent fellow-workers, especially flatter ourselves with services to humanity when the position is proved true, that we effect little, or nothing, by education. . . . I mean this: if all the ways and times of this poor earth were to be filled with dull, stiff images from old pedagogic law-codes, that is, with counterfeits of school-men, so that consequently every age would be a reprint of the preceding one, manikin for manikin; what else is wanted for this tedious misery but that education should succeed beyond our expectations, and a tutor and schoolmaster allow his head, like a crowned one, to pass stamped in all hands and corners.

In order not to fall into the error of those who introduce the bird Phœnix and the man in the moon unwived, I have here in my thoughts girls also, on whom as on pigeons and canary birds, false colors are painted by governesses, as well as by tutors, which the first rain or moulting removes. But, as has been said, every woman becomes in time something peculiar; a beautiful Idioticon of her many provinces of language.

Thru long teaching, to which no advance of the pupil is sufficiently proportioned, schoolmasters of understanding may arrive at the question: "How will the poor scholar be able to walk in the right path without our leading-strings, since even with them he runs into error?"

—and also at this wish: "Good heavens! that we could but wind him up and fix him, exactly like an astromonical hundred-yeared chronometer, so that he might show the hours and positions of the planets, and everything quite accurately long after our death!"—and consequently at this opinion: "That *they* were in fact the soul of his inner man, and had to raise his every limb, or were at least his supporting mold, in which he ought not merely to carry his broken arm as in a gentle bandage, but also his leg, his head, and his entrails, so as to be completely strengthened." If the tutor accompany his young master to the university, the one goes into much good society, without the other; and if they both at last set off on their travels, the young gentleman goes into much of a suspicious nature, and the tutor ends his anxiety;—which resembles the anxiety of a mother as to how the poor naked fœtus can exist when it comes into this cold, blowing world and is no longer nourished by her blood.

. . If we place ourselves on an eminence to contemplate thence the directions, fears, and demands of teachers, we almost feel tempted to drive them down from their lofty positions, especially because they, the educators, assume and presume so much; for they do not take and set before them the great World-plan as their school-plan, nor the All-educator as an example to the poor hedge-schoolmaster man,—but do so anxiously endeavor, with their narrow views, to assist the infinite Pedagogiarch (Prince of teachers) who permits sun to revolve round sun, and child round father, and so the child's and father's father are alike,—as if humanity, neglected for thousands of years, were laid before them, like warm wax, on which they had to impress their own individual induration, to produce future indurations; so that they might as recreators agreeably surprise the Creator with a living seal and plaster cabinet of their coats of arms and heads.

Importance of Education.

. . No former age or people is to be compared with any since the invention of printing; for since that time there have been no more isolated states, and consequently no isolated influence of the state on its component parts. Strangers and returned travelers, whom Lycurgus excluded from his republic, like episodes and the intervention of gods from the dramatic unities, now traverse every country in the shape of cheap books and waste paper. No one is any longer alone, not even an island in the most distant sea. . . Books form a universal republic, a union of nations, or a society of Jesus, in a nobler sense, or a humane society, whereby a second or duplicate Europe arises; which, like London, lies in several counties and districts. As now, on the one side, the book-pollen flying everywhere brings the disadvantage that no people can any longer produce a bed of flowers true and unspotted with foreign colors:—as now no state can be any longer formed purely, slowly, and by degrees from itself, but, like an Indian idol, composed of different animals, must see the various members of the neighboring states mingled with its growth;—so, on the other side, thru the Ecumenic Council of the book-world, the spirit of a provincial assembly can no longer slavishly enchain its people, and an invisible church frees it from the visible one.—And therefore we educate now with some hope for the age because we know that the spoken word of the teacher is re-echoed by the printed page; and that the citizen of the world, under the supervision of the universal republic, will not sink into the citizen of an injurious state, all the more because, the books may be dead yet glorified men, their pupils will ever hold themselves as their living relatives.

That the age writes so much on education shows at once its absence and the feeling of its importance. Only lost things are cried about the streets. . . The old circle, that the state should plan and direct the education, and this again act on that, has been very much rectified, or indeed squared, by the art of printing; for now men, elevated above all states, educate states; dead men, for instance, like Plato; just as in the deep old morning-world, according to the Saga, angels with glories wandered about, guided, like children, the new men who had sprung out of the ruins, and, having ended their instruction, vanished into heaven. . . The great man has now a higher throne, and his crown shines over a wider plain; for he works not only by action, but also by writing,—not only by his word, but also like thunder, by its echo. So one mind influences its neighboring minds, and thru them the masses. As many little ships draw a large one into harbor, so inferior minds bring the great one to shore that it may be unladen.

. . It is indubitable that everything impresses man either formingly or improvingly; so that, I think, not merely an assembly of people and of books, and great electric effusions in his heaven's equator discompose him, but also that damp weather unnerves him,—hence it is certain that no man can take a walk without bringing home an influence on his eternity; every spur, every star of heaven and of knighthood, every beetle, every trip or touch of the hand as certainly engraves itself upon us, as the gentle dewdrop or the hanging of a mist affects the granite mountains.

. . On this account education is always counseled to do as much as possible during the first year of life; for it can then effect more with half the power than it can in the eighth with double, when the sense of freedom is aroused, and all the conditions of being indefinitely multiplied. As farmers believe it most advantageous to sow in mist, so the first seeds of education should fall in the first and thickest mist of life.

In the first place have regard to morality. The inner man is, like the negro, born white and only colored black by life. If in mature years great examples of moral worth pass by without influencing our course of life more than a flying comet does that of the earth, yet in the deep heart of childhood the first inner or outer object of love, injustice, etc., throws a shadow or a light immeasurably far along its years; and as, according to the elder theologians, we only inherited Adam's first sin, not his other sins, since in one fall we copied every fall; so the first fall and the first flight influence us our whole life long. For in this early moment the Eternal works the second miracle; the gift of life was the first. It is then that the God-man is conceived and born of human nature; that self-consciousness, whereby a responsible being first appears, may be boldly called a conscience and a God—and unblessed is the hour in which this growing human being finds no immaculate conception, but in the moment of birth the Saviour and his Judas meet. Too little attention has been paid to this one invaluable moment, its environments and its fruits. There are men who can remember far back to this bounding hour of existence, in which their self-consciousness suddenly burst thru the clouds like a sun, and wonderfully revealed a beaming universe. Life, especially moral life, has a flight, then a leap, then a step, then a halt; each year renders a man less easy to convert, and a missionary can effect less on a wicked sexagenarian than an auto-da-fe.

What is true of the heart of the inner man is true also of his eye. If the former, like an ancient Christian church, must be turned towards the morning of childhood; the latter, like a Grecian temple, receives its greatest light from the entrance and from above. For, in regard to intellectual education, the child walks hand in hand with a nature which never returns; this nature is hitherto a wintry desert full of spring buds: wherever a sunbeam strikes it (for all teaching is warming into life rather than sowing) there the green leaves burst forth, and the whole child's life consists of warm creation days.

Two forces are at work: first, childlike trust, that imbibing power without which there could be no education and no language, but the child would resemble a bird taken too late from the nest, which must starve because it will not open its beak to the hand which brings its food. But this trust shows itself only in the minority, and sleeps in the mass of men and years.

The second power is excitability. As in the physical, so in the spiritual child, it exists in the highest degree in the physical and spiritual morning of life, and decreases with age, until at last nothing in the empty world excites the worn-out man except the future. Then the whole universe may strive to press its marks upon the man, but on the hardened matter only weak impressions remain.

The spirit of his age and nation must work unceasingly on the child; at first his only teachers are the age and nation. Moravians, Quakers, and especially Jews, give a direction to education which predominates over the surrounding dissimilar ages and people; and altho even they are influenced by the spirit of the age and of the multitude, yet it impresses them much more slightly than the masses who are differently educated. And however the spirit of the age may move and turn the heart, that little world, yet, like all balls revolving on themselves, it retains two innate, immovable poles—the good and the bad.

Moreover, the whole mass of people does not rush on the individual human being. Only some few in later as in early life affect the formation of our characters; the multitude passes by like a distant army. One friend, one teacher, one beloved, one club, one dining table, one work table, one house are, in our age, the nation and national spirit influencing the individual, while the rest of the crowd passes him without leaving a trace behind. But when do individuals affect us so powerfully as in childhood? or when so long—for in education, as in law*, *long* means ten years—as in the first decade? The waves of the ocean, besides, before reaching the child, break against four walls which encompass the water of his education or crystallization; father, mother, brothers, and sisters, and a few extra people are his forming world and mold. But, all this deducted, we must remember in education that its power, like that of the spirit of the age, which must not be measured by individuals, but by the concentrated mass or majority,—must be judged not by the present, but by the future; a nation or century educated by the same method presses down the balance quite differently from a casual individual. But we, as ever, desire that Fate, or the Time Spirit, should answer our inquiries by return of post.

The uniformity of the masses permits many irregularities in the individual; and altho the tables of mortality are correct, no one hopes and fears only by them. On the globe itself mountains disappear, and from these, at a distance, the stony path; but he who travels it sees it clearly enough. And when the dear, good man, along with his complaints of the ineffectiveness of good education, gives way to complaints of the influence of bad education, he then clearly proves by a capability to be ill-educated a capability to be well-educated; and so education is to be reproached with no want but the want of correct tables of the perturbations of a little wandering star caused by the revolutions of other planets; and will we not readily concede this?

(To be continued.)

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*Longum tempus est decem annorum. *Homm. prompt.*

Teachers' Examinations.

New York State Uniform Examinations.

Examination held August 14 and 15.

AMERICAN HISTORY.

1. *a.* In which colony was the first representative assembly held? *b.* Give its name and the date of its meeting.

2. *a.* Which colony was the first to pass an act tolerating freedom of Christian worship? *b.* What man was the first to resist the religious intolerance of the Puritans?

3. Name five New England colonies and state one important fact in connection with the history of each.

4. Give a historical event connected with the name of *a.* Ethan Allen; *b.* Paul Revere; *c.* Patrick Henry; *d.* Anthony Wayne.

5. *a.* What movement of the British forces was planned for the year 1777? *b.* What object had the British in view in attempting to carry out these plans?

6. *a.* What great American invention was made during the administration of Washington? *b.* What effect did this invention have on the subsequent industrial and social life of the country?

7. *a.* What was the principal question at issue in the admission of new states into the Union prior to 1860. *b.* How was the difficulty usually adjusted?

8. *a.* Mention two important events of Andrew Jackson's administration. *b.* Give a brief account of one of the events mentioned.

9. State fully the causes of the war between the United States and Mexico.

10. *a.* Who invented the Monitor? *b.* What important service did the Monitor render?

ANSWERS.

1. *a.* Virginia. *b.* House of Burgesses, July 30, 1619.

2. *a.* Rhode Island. *b.* Roger Williams.

3. Massachusetts, the establishment of a public school in Boston in 1635; Connecticut, the making of the first written constitution "known in history"; Rhode Island, the establishment of freedom of worship; New Hampshire, its settlement at Dover.

4. *a.* The capture of Ticonderoga; *b.* His ride from Boston to Lexington to warn the colonists of the coming of the British; *c.* His speeches against British oppression; *d.* The capture of Stony Point.

5. *a.* From Canada down Lake Champlain, from Oswego east to Albany, and from New York north to meet Burgoyne. *b.* To separate the New England colonies from the others.

6. *a.* The cotton gin; *b.* it greatly increased the production of cotton in the South and led to the introduction of slavery.

7. *a.* Slavery; *b.* by compromise.

8. *a.* The beginning of the anti-slavery movement and the nullification act. *b.* South Carolina refused to obey a law enacted by Congress. President Jackson sent troops to that state to enforce the law. Later the obnoxious law was modified.

9. There was a dispute over the boundary of Texas and United States troops were sent into the disputed territory to provoke a war.

10. *a.* Ericsson. *b.* It disabled the Merrimac in Hampton Roads and saved the Union fleet from destruction.

ARITHMETIC.

1. *a.* Write in Arabic notation a number involving billions and billionths. *b.* Express the same number in words.

2. What number can be subtracted seventeen times from 57 and have 9-10 remaining?

3. Combine with the proper sign those prime factors of 1176 and 256 which produce *a.* their least common multiple; *b.* their greatest common divisor.

4. Reduce to its simplest form $\frac{2\frac{3}{8} + 4\frac{3}{4}}{3\frac{4}{9} - 2\frac{7}{8}}$.

5. If a merchant marks his goods at 25 per cent. above cost and sells them at 25 per cent. below his marked price, does he gain or lose and what per cent.?

6. A borrows money for 90 days at a bank which charges 6 per cent. per annum; he pays $21 discount. How much did he borrow?

7. What is the depth of a watering trough 3 ft. 4 in. long, 1 ft. 9 in. wide, which holds 40 gallons?

8. A building owned by A, B, and C, valued at $3,000 and insured at $\frac{3}{4}$ its value, is destroyed by fire. The shares of

the partners are in the ratio of 2, 3, and 4 respectively. What is the loss to each partner?

9. Find the cost of $\frac{5}{8}$ of an acre of land at 20 cents per square foot.

10. Express in simplest integral form the couplet $\frac{4}{7}$: 2$\frac{2}{3}$.

ANSWERS.

1. *a.* 3000000000.000000003. *b.* Three billions and three billionths.
2. 3.3.
3. *a.* 2, 2, 2, 2, 2, 2, 2, 2, 3, 7, 7; *b.* 2, 2, 2.
4. 13$\frac{1}{41}$
5. Loss 6$\frac{1}{4}$ per cent.
6. $1,400.
7. 11 inches.
8. A 166\frac{2}{3}$; B $250; C 333\frac{1}{3}$.
9. $5,445.
10. 3:14.

METHODS AND SCHOOL MANAGEMENT.

1. Describe *a.* the inductive method; *b.* the deductive method.

2. Name two important advantages arising from the study of mental arithmetic.

3. State some of the objections to teaching reading by the *a.* alphabet method; *b.* sentence method; *c.* phonic method.

4. Should examinations be oral, or written, or both? Give reasons for your answer.

5. State how pictures may be used to advantage in teaching *a.* geography; *b.* language.

6. State an objection to having pupils write over and over again a word at the time it is misspelled.

7. Give reasons for and against keeping pupils after school as a punishment.

8. In examining papers in English composition should all mistakes be marked and the pupils required to rewrite the the paper making the corrections? Give reasons for your answer.

9. State the average amount of time, if any, that should be given daily to home study, by pupils in *a.* the primary school; *b.* the grammar school; *c.* the high school. *d.* Give reasons for your answers.

10. Show how correct methods of study on the part of the pupil lead to correct habits in later life.

ANSWERS.

1. *a.* The inductive method is one in which the procedure is from the particular to the general; *b.* the deductive method reverses this and begins with the general from which the truth of the particular is reached.

2. Power of consecutive thought and ability to express clearly and accurately.

3. *a.* It is a slow process; does not conform to educational principles; *b.* the sentence is not the natural unit, which is the word; *c.* our language is not a phonic language. The fact is there is no such distinction in methods now in use. The best teachers deal with the word, the sentence, the letter, and the phonic element at practically the same time.

4. Both, because each has value. A child should be trained to tell what he knows and to write it as well.

5. *a.* As graphic representations of scenes, places, occupations, etc. *b.* As suggestive of facts to write about.

6. It is often done carelessly and without making any impression on the mind.

7. It is a severe and at the same time not a harsh punishment; but it is likely to arouse the hostility of the pupil and his parents and prove ineffectual as a penalty. It punishes the tired teacher.

8. Yes. The object of writing is to secure correctness and it counts for nothing if errors are allowed to pass.

9. *a.* None; *b.* very little; *c.* three hours. The different stages of physical and mental development should determine.

10. They cultivate the will, demand self-denial, call for high purpose.

CIVIL GOVERNMENT.

1. *a.* Mention three purposes for which real estate may be taken for public use, against the owner's will. *b.* What name is given to the right to thus appropriate private property?

2. Name three classes of male citizens of full age to whom the right of suffrage is denied in this state.

3. By what legal process can a fugitive from justice be returned to the state in which the offence was committed?

4. By whom are standing committees selected in *a.* the house of representatives; *b.* the senate of the United States?

5. Mention the two ways by which an act of the legislature may become a law without the governor's signature.

6. *a.* Name the three co-ordinate and independent depart-

ments of the national government. *b.* Why should they be independent?

7. *a.* How many judges comprise the court of appeals? *b.* What is their term of office?

8. Mention three individual rights guaranteed to every citizen of this state by the constitution.

9. What state officer has supervision *a.* of the canals; *b.* of state expenditures; *c.* of Indian schools?

10. What are the constitutional provisions as to eligibility to the office of president and vice-president of the United States?

ANSWERS.

1. *a.* For highways, railroads, public buildings; *b.* eminent domain.

2. Inmates of prisons, lunatics, idiots.

3. By requisition.

4. *a.* By the speaker; *b.* by the members.

5. By the neglect of the governor to sign or return it within ten days; or by passing it again in both houses by a two-thirds vote.

6. *a.* The executive, legislative, and judicial. *b.* To secure independent action and that one may act as a check on the other.

7. *a.* Seven; b. fourteen years.

8. Trial by jury, freedom of speech, the writ of habeas corpus.

9. *a.* The superintendent of public works; *b.* the comptroller; *c.* the state superintendent of public instruction.

10. He must be a native born citizen, fourteen years a resident of the United States, thirty-five years of age.

PHYSIOLOGY.

1. Name a food which furnishes *a.* albumen; *b.* fibrin; *c.* gluten; *d.* casein.

2. Describe the ribs as to *a.* form; *b.* number; *c.* attachment to other bones; *d.* use.

3. What is the function of *a.* the deltoid muscles; *b.* the *intercostal* muscles?

4. What bones are found in *a.* the shoulder; *b.* the shin; *c.* the forearm?

5. *a.* Name the layer of the skin of which the hair is a modification. *b.* What condition of the hair causes it to turn white?

6. *a.* What *is the direct* cause of astigmatism? b. To *what is the color of the* eyes due?

7. Describe the structure of the veins as to *a.* their walls; *b.* their valves.

8. What effect does alcohol have on the red corpuscles of the blood?

9. Mention three common sources of impurity in the air of a school-room.

10. *a.* Locate the liver and the pancreas. *b.* Into which portion of the intestine does the secretion of each pass?

ANSWERS.

1. *a.* Eggs; *b.* lean beef; *c.* wheat; *d.* milk.

2. *a.* They are long, thin, and curved; *b.* twenty-four in number; *c.* attached to the spine and seven of them on each side are also attached to the sternum; *d.* they are the framework of the thoracic cavity.

3. *a.* To move the arms upward and outward; *b.* to raise and lower the ribs.

4. *a.* The clavicle and scapula; *b.* tibia; *c.* ulna and radius.

5. *a.* Cuticle; *b.* defective secretion of pigment.

6. *a.* A different curvature for the meridians of the eye. *b.* To the color of the iris.

7. *a.* Their walls are made up of three coats of firm, rather inelastic, tissue; *b.* their valves are folds of membrane which keep the blood from flowing backward.

8. It changes their form and lessens their ability to carry oxygen.

9. Dirty floors, chalk dust, and the consumption of oxygen by the children.

10. *a.* The liver is just below the diaphragm on the right side, the pancreas behind the stomach; *b.* into the duodenum.

SCHOOL LAW.

1. What certificates may be renewed by a school commissioner without re-examination?

2. State two important reasons for keeping a correct record of attendance of pupils.

3. *a.* What officer may direct the trustee of a common school district to expend money for school furniture? *b.* To what amount?

4. What restriction is placed upon a trustee of a common school district, in hiring a teacher related to him?

5. State the provision of law relating to the dismissal of a *teacher.*

6. What officer of a common school district receives compensation ?

7. What three qualifications are specified in a teacher's certificate ?

8. In what particulars must plans for a school-house be approved by the school commissioner ?

9. What should a teacher do with the school register at the termination of his contract ?

10. Who has the authority to admit non-resident pupils to a public school ?

ANSWERS.

1. First grade, training class.
2. It is necessary in determining the apportionment of school money and in enforcing the compulsory attendance law.
3. *a.* The school commissioner ; *b.* $100.
4. He must be authorized to do so by a two-thirds vote of the voters present at a district meeting.
5. He may be dismissed for sufficient cause.
6. The collector.
7. Scholarship, moral character, ability to teach.
8. Heating, ventilation, lighting.
9. Deposit it with the district clerk.
10. The trustees.

GRAMMAR.

1 For this reason the Victoria Cross is jealously guarded.
2 Men are taught to volunteer for anything and everything ;
3 going out quietly after, not before, the authorities have
4 filled their place. They are also instructed that it is cow-
5 ardly, it is childish, and it is cheating to neglect the plain
6 work immediately in front of them, the duties they are
7 trusted and paid to do, for the sake of stepping aside to
8 snatch at what to an outsider may resemble fame or dis-
9 tinction.
10 The order itself is a personal decoration, and the honor
11 and glory of it belong to the wearer ; but he can only win
12 it by forgetting himself, his own honor and glory, and by
13 working for something beyond and outside and apart.
14 And that is the only way you ever get anything in this
15 world worth the keeping. —RUDYARD KIPLING.

The first eight questions refer to the above selection.

1. Classify all the subordinate clauses according to note 1.

2. Parse *a. immediately* (line 6) ; *b. what* (line 8).

3. Make a list of *a.* the transitive verbs; *b.* the intransitive verb; *c.* the verb in the passive voice.

4. Give the syntax of *a. duties* (line 6); *b. itself* (line 10); *c. decoration* (line 10).

5. Select two infinitives differing in syntax, and give the syntax of each.

6. Select two participles, differing in syntax, not including any employed in predication. Give the syntax of each.

7. Select two adjective phrases and three adverbial phrases, not including infinitives, and tell what each modifies.

8. Classify as parts of speech the following: *a. after* (line 3); *b. cowardly* (line 4); *c. cheating* (line 5); *d. apart* (line 13); *e. only* (line 14).

9. *a.* Which four parts of the verb are called principal parts? *b.* Write the conjugation of the verb *come* in the indicative mode, future perfect tense.

10. Write a sentence in which an omitted relative pronoun is the object of *a.* a verb; *b.* a preposition.

ANSWERS.

1. *Authorities have filled,* adverbial; *it is cowardly, childish, cheating,* substantive; *they are trusted* and *paid,* adjective; *what may resemble,* object; *you get,* adjective.

2. *a.* Adverb, modifies *in front; b.* relative pronoun, third person, singular number, nominative case, subject of *may resemble.*

3. *a. Are taught, have filled, are instructed, neglect, are trusted, paid, may resemble, can win, forgetting, get, to do; b. belong, volunteer, snatch, going, stepping, working, is; c. is guarded, are taught, are instructed, are trusted, paid.*

4. *a.* Objective case, in apposition with *work; b.* nominative case, in apposition with *order; c.* nominative case in predicate with *is.*

5. *To volunteer,* depending on *are taught,* as a retained objective. *To neglect,* subject of *is.*

6. *Cheating,* predicate with *is; working,* object of preposition *by.*

7. Adjective phrases: *of them,* modifies *front, of it,* modifies *honor* and *glory;* adverbial, *for this reason,* modifies *is guarded, for anything,* modifies *volunteer, to wearer,* modifies *belong.*

8. *a.* Conjunctive adverb; *b.* adjective; *c.* participle; *d.* adverb; *e.* adjective.

9. *a.* The present indicative, the past indicative, the present and past participles. *b.* I shall have come, you will have

come, he will have come, we shall have come, you will have come, they will have come.

10. *a.* This is the poorest lot of questions I ever saw *b.* The book I was speaking of is on the table.

READING.

Nothing useless is, or low ;
  Each thing in its place is best ;
And what seems but idle show
  Strengthens and supports the rest.
—*Henry W. Longfellow.*

1. Copy the above selection, underline three emphatic words, and give reasons for your choice.

2. What is the central thought of the above selection ?

3. What inflection usually follows *a.* an indirect question ; *b.* answers to indirect questions ? *c.* Give illustrations properly marked.

4. Name the three principal modifications of the voice used in reading or speaking.

5. Name five books, other than school readers, suitable for supplemental reading in the seventh grade and state the author of each.

ANSWERS.

1. Nothing *useless* is or *low ;*
  Each thing in its place is *best*
And what seems but *idle show*
  Strengthens and *supports* the rest.

These words express the ideas to which the writer calls special attention.

2. That the common distinctions made by men are not true.

3. *a.* Falling ; *b.* falling ; *c.* He asked why this was done.

4. Time, pitch, quality.

5. Uncle Tom's Cabin, Harriet Beecher Stowe ; Tanglewood Tales, Hawthorne ; Ivanhoe, Walter Scott ; Tom Brown's School Days at Rugby, Thomas Hughes ; Pilgrim's Progress, John Bunyan.

HISTORY OF EDUCATION.

1. State why teachers need to be familiar with the science and the history of education.

2. What four things, besides fortune, did Locke declare a gentleman ought to desire for his son?

3. Name two important subjects treated very fully in the reports of Horace Mann.

4. Compare the educational system of the Jesuits with other educational systems of the 16th, 17th, and 18th centuries.

5. Give *a.* Roger Ascham's most noted work ; *b.* the name of his most noted pupil ; *c.* his method for studying languages.

6. Write a brief account of the educational work of Froebel.

7. Name some inventions, discoveries, and social conditions that contributed to the revival of learning at the close of the dark ages.

8. *a.* What science did the Mohammedans originate? *b.* In what mathematical subjects did they make great advances?

9. *a.* Who was the most popular teacher of scholasticism? *b.* With what great school was he intimately associated?

10. Give an account of examinations for degrees in China.

ANSWERS.

1. The history of education broadens the teacher's horizon; shows him what has been done and inspires him to greater effort. The science of education is the basis of the art of teaching and knowledge of it lifts the teacher out of the mechanical into a more intelligent method of work.

2. Virtue, prudence, good manners, instruction.

3. The worth of common schools to the commonwealth; the value of the various studies.

4. It was more formal, mechanical, and efficient. It appealed more to memory, made use of emulation and neglected primary education.

5. *a.* The Scholemaster ; *b.* Queen Elizabeth : *c.* by double translation.

6. He instituted the kindergarten, wrote an important treatise on education and lectured extensively in an effort to arouse public sentiment in behalf of child training.

7. The invention of printing ; the mariner's compass ; gunpowder ; religious crusades ; the capture of Constantinople by the Turks.

8. *a.* Chemistry. *b.* Algebra and trigonometry.

9. *a.* Abelard ; *b.* The University of Paris.

10. They were conducted by the state. There are four degrees to be taken in order by those who aspire to high office in the state. The examinations are principally tests of memory.

GEOGRAPHY.

1. Define *a.* meridian ; *b.* parallel. *c.* What meridian is commonly accepted as the prime meridian? *d.* What may appropriately be called the prime parallel?

2. Define *a.* mountain system; *b.* mountain chain; *c.* plateau. Name and give location of an example of each.

3. Designate a section of the United States which is mainly *a.* a manufacturing section; *b.* a mining section; *c.* a grain growing section; *d.* a grazing section.

4. Trace a probable route from New York to the Philippine islands *a.* going in an easterly direction; *b.* leaving New York in a westerly direction.

5. Name four large islands of the West Indies and state the form of government in each.

6. Name and give the location in South America of *a.* three capes; *b.* three large rivers; *c.* a lake.

7. Give the name and location of *a.* three peninsulas of Europe; *b.* three islands of the Mediterranean; *c.* three seas which indent the European coast.

8. What is *a.* the chief seaport of Egypt; *b.* the capital city; *c.* the title of the chief ruler?

9. Give the name and location in Central America of *a.* three republics; *b.* one important city; *c.* one lake.

10. State the causes of the rapid growth of Buffalo from a small village in 1825 to a city of 352,387 population in 1900.

ANSWERS.

1. *a.* A meridian is a line passing around the earth thru the poles. *b.* A parallel of latitude is a line passing around the earth parallel to the equator. *c.* The meridian passing thru Greenwich, England. *d.* The equator.

2. *a.* A mountain system is a series of mountain chains contiguous and generally parallel to each other. *b.* A mountain chain or range is a series of closely related mountains. *c.* A plateau is an elevated plain. The Rocky mountains, the Cascade range, and the Colorado plateau are examples of each in order.

3. *a.* New England; *b.* Idaho, Nevada; *c.* Minnesota; *d.* Colorado.

4. *a.* By rail to Chicago, to San Francisco, then by water to Honolulu and to Manila. *b.* By steamer to St. of Gibralter, to Suez canal, thru Red sea and Indian ocean to Manila.

5. Cuba, republic; Porto Rico, part of the United States; Jamaica, a province of Great Britain; Haiti, a republic.

6. *a.* Cape Horn at the southern extremity, Cape St. Roque on the east, and Pt. Gallinas on the north. *b.* Orinoco in the north, Amazon north of the central, and La Plata south of the central part. *c.* Titacaca, between Bolivia and Peru.

7. *a.* Spain and Portugal in the southwest; Italy on the south, and Norway and Sweden on the north. *b.* Sardinia in the western part; Sicily, south of Italy; Candia, southeast of Greece. *c.* North sea, between England and the Continent; Baltic, between Sweden and Germany; Black sea, south of Russia.

8. *a.* Alexandria; *b.* Cairo; *c.* khedive.

9. *a.* Honduras in the north; Nicaragua south of Honduras, and Costa Rica, south of Nicaragua. *b.* Greytown, on the east coast of Costa Rica. *c.* Lake Nicaragua, in Nicaragua.

10. Its location on the lake; its harbor and the Niagara river and falls; the Erie canal.

History of Our Times.

In nearly all the states a knowledge of current events is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

(See *Our Times* of November 1 and November 15.)

How was the coal strike ended? What arguments are there in favor of this mode of settling labor disputes?

Give a history of the Pious fund case. How was it decided?

What noted woman suffragist died lately? Give a brief sketch of her life.

What is now the leading question in British politics?

Give the substance of the report of Professor Jenks in regard to the government of the Philippines.

Tell about the division of land among Indian territory tribes.

What immigration evils are reported?

Describe the great seal of the United States. Relate its history.

What plea does Arizona make for statehood?

What advice did Carnegie give to Europe?

Where in Asia is Germany building a railway?

Why was a British force sent to Somaliland?

Why is Crete still dissatisfied?

What Asiatic prince lately visited this country?

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Vol. XV. No. 5 Monthly, $1.00 a Year
JANUARY, 1908

EDUCATIONAL FOUNDATIONS

A Monthly Magazine of Pedagogy and General Culture *for* Teachers, Normal Schools, Training Classes, Reading Circles *and* Home Study

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Educational Foundations

Ossian H. Lang, Editor.

VOL. XIV. JANUARY, 1903. No. 5.

President Woodrow Wilson, of Princeton university, in an address delivered some time since, takes a view of character development radically different from the usual one found among educators. "We have heard," he said, "a great deal of cant about cultivation of character. I say, get out and do something, and your character will be cultivated. Character is a by-product."

Here is a good topic for a lively pedagogical discussion. President Wilson is as right from his standpoint as some others are with a different conception of moral character building. Reports of meetings at which the question has been discussed would be much appreciated by the editor.

The editor regrets very much to have to confess to a serious disappointment at not being able to supply the promised series of studies of the world's great paintings, in the present volume. The gentleman who had consented to prepare the series after considerable delay found it necessary to release himself, owing to pressure of other work. The department of art study will, however, be carried on thru the year. Mr. Frederick W. Coburn, whose splendid articles in previous volumes were so well received by readers of EDUCATIONAL FOUNDATIONS, will present next month a most interesting discussion of "The Mathematical Substructure of Art."

It is decidedly more difficult to secure suitable contributions for this magazine than for other educational periodicals. Having to look after the editorial management of three other serial publications for teachers, I think I can say this with the weight of an extensive experience behind me. The difference between writing for this magazine and others is that the material here offered must be of a character to bear the test of careful study by earnest students of education. EDUCATIONAL FOUNDATIONS is used as a text-book by many, and hence the demands made upon its pages are more exacting than is usually the case in a periodical. Educators whose articles would be most desired are usually too hard pressed by their scholastic duties to give the proper care to writing.

It is well that the readers should know something of these difficulties. Many articles originally written for these pages have had to be turned over to other periodicals, as not fully answering the peculiar requirements of this magazine.

It is quoted from Lord Bacon that a debt is owed to the chosen profession because of the path that has been beaten out by those who have gone before. It is a good question for each to ask himself whether he is discharging this debt. To make the matter practical let us look at what the Masonic societies of New York are doing. They have united and possess a "home," that is, own and run a house, where a member of the guild, no matter where he comes from, may be housed and fed, if he is needy.

Now in the course of human events teachers will become old and poor and need care and assistance. Are the teachers of the cities in a position to aid such? This is a serious and proper question. Cases have come to our knowledge that could not fail to arouse profound sympathy. One, having taught a half century with honor, was obliged to betake himself to a ten-cent lodging house in his old age, and there breathe his last.

This is a subject to which we invite earnest attention. We think "Homes for Teachers" could be made a subject at gatherings, for popular discussion as well as ways to parse "what" and spell "tough."

The editor thankfully acknowledges the many helpful suggestions that have come to him from the responses of friends to his requests for criticisms. Now and then a letter reveals a misunderstanding of the peculiar objects of this magazine, and the editor is then enabled to explain the limits this series of monthly texts has to set itself. Thus there have been several complaints to the effect that the answers to the questions used in examination for New York state certificates ought to have been given. The reasons for omitting the answers are many. The examinations can concern only those who have already advanced to a point where they ought to be ashamed to depend upon so unsatisfactory a list of answers as would have to be given owing to the extensive scope of the questions. Those who desire to take these examinations will certainly be satisfied with the directions and suggestions furnished by the questions as here printed. Furthermore, as a general rule, the department of teachers' examinations gives the answers to all questions that do not presuppose a thoro mastery of the subject. The value of these simple questions with their corresponding answers has been frequently spoken of in former volumes, and need not be here enlarged upon.

Coming Meetings.

Jan. 22-24.—North Carolina Association of City Superintendents, at Raleigh, N. C.

Feb. 10-11.—Department of City and Borough Superintendence of Pennsylvania, at Harrisburg.

Feb. 12-13.—Department of School Directors of Pennsylvania, at Harrisburg.

Feb. 24-26.—Department of Superintendence, N. E. A., at Cincinnati, Ohio.

July 6-10.—National Educational Association, at Boston, Mass.

School Administration.

The Morale of the School.

By SUPT. C. B. GILBERT, Rochester, N. Y.

(Continued from last month.)

THE conduct required in school must grow out of the life of the school and must evidently further the ends of the school if such conduct is to result in sound character. This means that the school itself should be upon a high plane, that the life lived should be worthy, and that the employments, which are the key to the whole life, should be such as appeal to children as worth their while.

Children go to school to learn. This is the common statement and in the main it is sufficiently accurate for our purpose. That is, they go to school to be nourished by truth, strengthened by exercise. Going to school should be no more unpleasant to children than going to any other place where choice leads them. Learning, that is, mental growth, is no more unnatural than bodily growth and the act of taking mental nourishment and of engaging in mental exercise is just as natural and should be just as agreeable as taking bodily nourishment or engaging in bodily exercise. And it will be to sane children if it is adapted to them, if it fills their lives. The trouble with much of the school life is that it is only partially filled by the school occupation and for much of the time the mind is vagrant. Much of the work forced upon children fails to interest them because it fails to supply any felt need.

Now, let no weak brother or sister think that I believe in making work interesting by artificial devices or in amusing children to persuade them to study. By the *term interest* I mean that vital earnestness in accomplishing an end which the successful man has in his business or which the child has when playing a game. Children are as desirous of doing things as their elders. School too often fails in that there is nothing given them to do that seems to them to lead to anything or to amount to anything. We are told that children must of necessity learn the expressive arts, reading, writing, and the rest, and so they must and they will readily, if these lead to anything, but young children must have a motive and a motive immediate and apparent. It is hard enough for others to work in the dark for remote ends. It is too much to expect of children. The teacher must have the remote end in mind, but to the child the immediate end appeals. If he feels that thru studying a lesson he is gaining some desirable result either in power among his fellows or in personal enlargement, if he sees that by reading he is placed in possession of means to reach some desired end it is not difficult to interest him in learning to read, but until he has some interest in what can be secured thru reading, learning to read does not appeal to him.

The same principle applies to all the arts. School life then must be based upon occupation which has a meaning to the children. Courses of study must be rich in substance. Nor is it enough to have the school occupation consist wholly in the exercise of memory, "learning things" in the common sense. Supplementary to this is doing, expressing, putting into definite form or into actual use that which is learned. The child who is learning the principles of language must first have something to express and be filled with the desire to express it well.

The place of manual training and drawing and painting is found when we consider them as expressive arts, new means by which the child makes tangible and effective his ideas, for growth depends as much upon exercise as upon food and the two are co-ordinate and essential in the occupation of the true school. All the various forms of work fit into their proper places. Ideas are stimulated and then expressed, desires created and then satisfied. Children are employed in that which holds their attention because they desire to accomplish something if there is something to accomplish.

The excellence of the school is too often measured by the success with which the children sit still rather than by the success with which they do things. This recalls the experience of Dr. John Dewey when looking for school desks for his experimental school. After visiting many dealers and failing to find what he wanted, he was asked by one to explain his need. He did so. The dealer said at once, "Why, you want a desk for children to work at, these are all for listening." And listening has been altogether too much the business of the school from the children's side.

In my last article I spoke of the dangers of mass teaching and advocated group work. What I had to say there has a direct bearing upon moral training. In a school conducted on the mass plan the individual not only loses his individuality for the time, but he loses his best opportunity for a certain most valuable moral training. The power of solitary, unaided, persistent work for a worthy end is absolutely necessary, not only to business success, but to sound character. Pupils in schools conducted on the mass principle never acquire that power. Every child if he is to be strong morally, that is, to be able to stand alone, meet difficulties according to sound principle, must, during his period of school training, do much work alone, metaphysically removed an infinite distance from the helping teacher. It should be a part of the morale of the school to encourage this independent, solitary work just as in society the busy world must provide room for the individual worker and must keep out of his way; for let it be remembered that morality has to do with society and nothing else. Solitary morality is an absurdity of language and of thought. This does not mean, however, that the individual is never to be alone, or, if alone, cannot do right.

Social freedom requires this self-restraint. The members of no society are free unless they put checks upon themselves, for anarchy is the worst foe of freedom. In a state of anarchy everybody is in everybody's way and no one finds himself free to do anything. So a busy school while not necessarily or ordinarily an especially quiet school is as far removed from anarchy as heaven from earth.

But still further, pupils in school should not only keep out of one another's way, but at times should positively help one another. That is a function which in a normal school of rigid discipline is not deemed possible. It is true that children must work out their own salvation and yet co-operation in which one mind stimulates another and supplements another is a necessary condition of society and there is no reason why it should not exist in school. In the recitation, naturally there is friction of minds and the supplementing of each by all the others. But there is no reason why in the working out of problems in different subjects there should not be like co-operation. It is a most useful exercise in training for social life. It is very easy in such subjects as manual training to secure this co-operation. I remember some boys in a manual training high school making a roll-top desk for the superintendent of schools. I do not remember just how many boys were engaged upon this piece of work, but perhaps twenty, each one making some one part of the desk; upon some of the more difficult parts, two or three working together. Those parts had to be made so that they would fit. There was necessarily constant consultation and comparison and suggestion of one to the other. It was a fine instance of team work and the result was not merely a beautiful desk but an abundance of the best sort of training for social life. It was highly moral training. A football team has much the same training. Great enterprises require the exercise of many brains and practice in independent co-operation is most valuable.

Mr. Carnegie said the other day that to make millionaires it was absolutely essential to take into partnership competent heads of departments, that means, as I understand it, that no great business is developed by the brain of one man alone, but rather by the co-operation of many. Certainly the social life of a community is only successful when many members work together in harmonious co-operation. And this kind of training can be given in the schools and should be given. Not only in the manipulation of the shop is it possible, but in innumerable exercises. Investigations can be carried on in geography or history or the natural sciences, one pupil investigating one field and another another, all bringing in the results of their investigation and compiling them into a single product. The essential is that each one should feel his personal responsibility for the whole and should meet it by doing his part. If all the members of a community felt a personal responsibility for the well being of the community we should at once have an ideal condition of things.

All pupils of a school should come to feel a personal responsibility for the well-being of the school. They should feel that it is their institution, that it exists for them all and not for the teacher alone. And they should be led to restrain themselves from interference with one another and to contribute with their best to the common good, and this condition should grow out of the occupation of the school which must have a definite meaning to the children. Matthew Arnold's oft quoted remark, "*Conduct* is three-fourths of life" might be supplemented by another that occupation is the key to conduct. It may be necessary for the teacher on assuming control of a new school, for a very brief time to control the school by absolute will, but if it is done for more than a very brief time the result will be distinctly bad. Common interest must take the place of personal domination if the children are to be trained for society.

The morale of the school must grow out of what the children do. Indeed, it does grow out of it. If the children do not do things worthy and have not enough to do to employ their minds, of work set by the teacher, they will do other things unworthy in violation of the teacher's will or ignoring it, which will give a distinctly lower morale than that which is desirable.

It is impossible to escape the truth that occupation determines conduct, and conduct both grows out of and produces character.

I desire to call attention to one corollary of what has already been said regarding moral training. The use of secondary ends as motives to conduct is always to be restricted to an immediate and pressing emergency. It should never be a continuous part of the school discipline. By secondary ends in school I mean prizes, marks, and punishments. The reasons are not far to seek. They concern, however, the whole field of ideals. The trouble with the world so far as it is wrong is, of course, that people are pursuing wrong ends commonly minor or secondary ends under the mistaken notion that they are primary. People chase wealth, social position, and political power for themselves and so enter upon an endless pursuit and are never happy. These objects pursued are elusive because they are not real; they are means to ends and are not properly ends at all, or if ends, they are merely secondary ends. Have we a right to wonder at the perversity of humanity in thus following unworthy ends when we see that in the majority of schools secondary ends are held before the children until their pursuit becomes habitual? How can we expect children who have been taught to study for marks or prizes or to avoid punishment, instead of pursuing, with a live interest, knowledge itself, to acquire a love for truth? How can we expect such children when they grow up to pursue social service thru the use of available means, instead of pursuing these means as if they were the ends themselves?

By holding up prizes and marks before children as the ends of study we substitute an inferior pleasure for the true joy of genuine attainment, and worse than all create the habit of such pursuit. There are natural defectives, or those in whom the moral sense and any deep interest are simply inchoate, who must be treated like invalids, and for such, a secondary end as an inducement may be necessary; but it is absurd to say that a school of normally healthy children must be induced to study by the offer of a prize or the fear of punishment. That is a part of the silly nonsense that is taught by those who have spoiled their schools thru excess of conventionality. Normal children are more readily attracted to what is worthy than to what is unworthy and it is quite as easy for a good teacher to arouse interest in the real ends of school life as in the secondary ends and the result is much more desirable.

QUESTIONS.

1. What do you consider the best tests of an educationally sound school character?

2. A teacher complains that many of her pupils are not interested in their school work. What, in your opinion, are likely to be the reasons for this condition? Explain and cite pedagogical principles bearing upon this case.

3. What do you consider the true measure of a teacher's success?

(Continued on page 301.)

Child Study.

Temperaments in Children.

A Catechism for Educators After Lanckhard.

1. What is the first duty of an educator?

To learn to know and understand his pupils.

2. How can he learn these things?

By sympathetic intercourse and careful observation. He must particularly try to discover the temperament of each pupil.

3. What is meant by temperament?

An hereditary, natural interaction of mind and body; that with which man is by nature equipped and stamped as a peculiar personality or individuality. It is the source of man's greatest strength and greatest weakness. It is one of the fundamental problems of education to make the best of this natural disposition, to guard its development against obstructions, and to bring it to right harmony with the ideal of education.

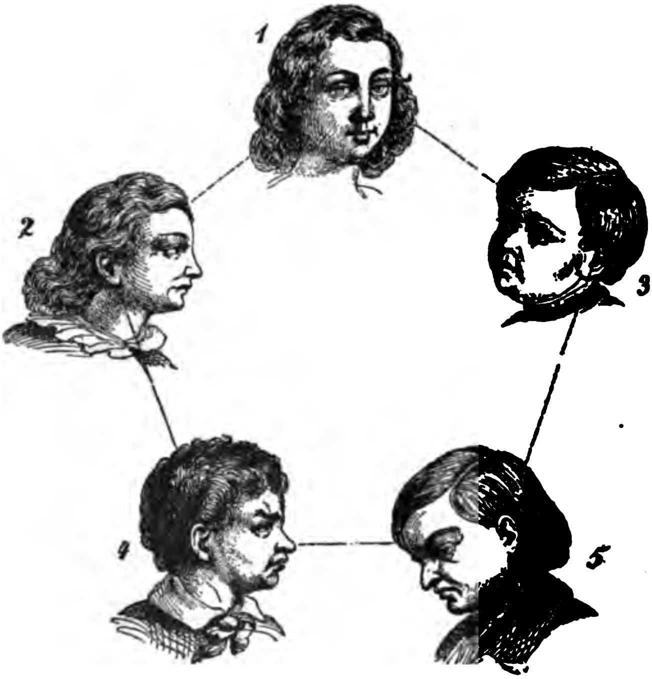
4. How many temperaments are there?

Various classifications of temperaments have been proposed. Most modern psychologists prefer to go back to the old four-fold classification which divides temperaments into the melancholic, phlegmatic, sanguine, and choleric. For educational purposes it is convenient to have five classes, adding as a fifth the harmonious temperament.

5. What are the relations of the five temperaments to one another?

I. In the accompanying diagram we have on the right hand what might be called *vegetative* or quiet temperaments: (a) the *melancholic* (No. 5)—tending to predominance of sensitiveness (feeling); (b) the *phlegmatic* (No. 3)—tending *to predominance* of intellect.

II. On the left hand are the *animal* or agile temperaments: (c) the *choleric* (No. 4) tending to predominance of will; (d) the *sanguine* (No. 2)—tending to predominance of imagination.



III. The two sides of life following the universal law of *polarity* are opposed to each other. Their union and harmonious equation is found in (e) the *harmonious* temperament (No. 1)—tending to predominance of reason.

6. Is it difficult to discover the temperaments in children?

Parents usually have greater difficulty in recognizing them than strangers as they are prejudiced in judging their own offspring. Teachers ought to be the best judges of children's temperaments.

7. Is it difficult to distinguish the characteristics of the different temperaments?

No, not if one takes pains in observation. The two large classes are easily distinguished, to wit: *quiet* and *lively* children. The quiet ones are disposed to become either phlegmatic or melancholic; the lively ones, on the other hand, may some day become choleric or sanguine.

8. How does one discover the PHLEGMATIC *temperament?*

There is noticeable, in the first place, a certain indifference to external impressions; in the second place, an inclination to continue in a condition or pursuit (to remain either quiet or in motion); and lastly, a predilection (predisposition) for the useful, the worldly, and the prosaic. Children of this nature are usually healthy and strong.

9. How can one recognize the MELANCHOLIC *temperament?*

There is noticeable a greater receptivity for external stimuli (in this it is distingished from the former temperament); a disposition to secrecy and a predilection for solitude; a love for depth and thoroness; and, finally, a lack of power to ward off unpleasantness. Children of this temperament are frequently weak and delicate, but learn well, and, as a rule, are talented and ahead of those of their age.

10. What are the peculiarities of the SANGUINE *temperament?*

Exuberance, liveliness, and jollity, also carelessness; love of change (the opposite of the phlegmatic temperament), superficiality. The sanguines often allow their impulses to conquer reason. They are inclined to talkativeness and frankness (open-heartedness). Children of this temperament are usually amiable, but seldom fulfil the expectations placed in them.

11. What peculiarities reveal the CHOLERIC *temperament?*

Excitability, irascibility, a tendency to being quarrelsome, always wanting to be right, destructiveness, and a lively impulse to activity. Children of this temperament love to work, and, as a rule, are upright and honest, but they also like to be the rulers of their comrades.

12. Are the temperaments ever to be found entirely pure?

No. No more than unmixed colors in nature. The temperaments always have admixtures of one sort or another. Mixtures of related temperaments, such as the melancholico-phlegmatic or cholerico-sanguine offer more favorable opportunities to the educator than the combination of opposites, such as the melancholico-choleric or phlegmatico-sanguine.

13. What is the reason for this difference?

Similars are more easily unified than opposites. Phlegmatico-sanguine and cholerico-melancholic temperaments naturally involve contradictions and are not favorable to the development of an harmonious character.

14. What is meant by HARMONIOUS *temperament?*

That happy gift of nature which expresses itself in an agreeable harmony of mental dispositions, in which neither feeling, nor will, nor intellect, nor imagination predominate. Men of this temperament always make a pleasing impression upon their environment and usually excel in matters requiring sound judgment, even in matters in which they are less informed than their better informed inferiors. They seem to be always knowing just what to say and do under all circumstances.

15. What are the characteristics of this temperament?

Children of this temperament are distinguished by soundness of mind; they are apt without being precocious, diligent without apparent exertion, amiable without caprices, and usually surpass the good expectations their friends have placed in them. This temperament reveals itself in poise—poise in speech and action and in native graceful movement. It is to be found in palaces as well as in lowly huts.

16. What may be said of temperaments in general?

That the melancholic temperament is, or is apt to become, the source of *caprices*; the phlegmatic, of the *weaknesses*; the choleric, of the *passions*; the sanguine, of the *follies* of the human heart.

Trachoma.

Historical evidence traces trachoma back at least 3,500 years. It was known to the Egyptians, Israelites, Greeks, and Romans. The European infection may be attributed to Napoleon's soldiers, who contracted the disease in Egypt a hundred years ago. There has been a decline in the disease since 1850, and it is now confined more or less to Russia, Hungary, Belgium, and Eastern Prussia. Its ravages in Eastern Prussia and particularly in Posen were due to poor hygiene, overcrowding, lack of occupation, poverty, and alcoholism. It has been asserted that trachoma is to be found only in low countries, but the evidences are that the only indispensable factors for its spread are contagion and defective hygiene.

The Eyes of School Children.

Within a few years systematic examinations of the eyes of school children have been made, and at present we have statistics of over 200,000 pairs of eyes.

An analysis of these examinations shows that in the primary school nearly all the children enter with normal eyes. In the higher grades twenty-five per cent. have become myopic, while in university life the percentage of myopia has increased from sixty to seventy per cent., which shows that the number of near-sighted pupils increases from the lowest to the highest schools, and that the increase is in direct proportion to the length of time devoted to the strain of school life.

A Continued Study of Children's Attitudes

By LILLIAN M. TOWNE, Boston Normal School.

The *American Physical Education Review* prints a report of the public school section of the Boston Physical Education Society which sums up the results of observations made upon about fifteen hundred different pupils in Boston, Waltham, and Bridgewater, noting their individual positions four times each day for one week.

As a guide for the work, blanks bearing the following points were distributed to class teachers:

I. Good position.
II. Front position (trunk erect).
    1. Knees in desk (both, L. or R.).
    2. Sitting on foot (both, L. or R.).
    3. Leaning on elbow (both, L. or R.).
    Chest flat.
III. Forward position.
    Shoulders rounded.
IV. Bending position.
    Uneven shoulders.†
V. Twisted position.
    1. Entire trunk twisted.
    2. Pelvis front, shoulders twisted.
VI. Sliding down position.
    1. Shoulders front.
    2. Shoulders twisted.

N. B.—If the points 1, 2, 3, under front position or uneven shoulders† appear in any other position, please indicate.

Information as to the following points was also solicited: The grade of the class, the character of the seats, the position of the windows and blackboards; and with each observation the nature and length of the recitation, the kind of day, and the temperature of the room were to be recorded.

The reports selected as the basis for this outline cover the various school grades as follows: Three for each of the first seven grades and two for each of the eighth and ninth, giving a total of about three hundred pupils (312). Only children of average ability have been chosen for study, the number of boys and girls being approximately equal. The observations have been made by grade teachers, or by pupil teachers who were interested in hygiene and physical training.

More girls than boys have the habit of sitting upon one or both feet. Likewise, more boys than girls have been found to slide down in their seats. Why are these attitudes so characteristic of the sexes? The twisting exists in all grades. But a point strongly emphasized is that the twisting is largely dependent upon the work being done. In one grade, in the study of a chart, each of the eight pupils was twisted to the left. In the next observation, arithmetic, four of the eight were still twisted to the left, while one was bent in the same direction. Again, as the teacher talked from one side of the room, the entire group was twisted to the left. Between the fourth and seventh grades (ages 8-13), there is the maximum of forward positions, bends, and twists. Why are these attitudes, so harmful to symmetry and health, accentuated in this growing period?

It is well known that fatigue resulting from activity of mind or body may be modified by environment. Thus, damp, muggy days, by hindering the elimination of waste material, are conducive to fatigue. Foster[*] is quoted as saying that the loss of physical power on such days can be measured in foot-pounds. Teachers generally believe posture to be more faulty at such times. In this connection, this comparison selected from observations made upon the same pupils in the same subject at the same time, except on different days, is interesting:

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[*] Relation of *Fatigue to* Social and Educational Progress. *Henry S. Baker.*

Reading. 3.40 P. M. Thirty minutes.

	Dull, muggy. 72°.	Pleasant. 78°.
Boy.	Forward position, feet crossed.	Good position.
"	Bent left. Shoulders uneven.	Sliding down.
"	Front. L. foot in desk iron.	Good position.
"	Good position.	Front. Feet crossed.
"	Forward, leaning on both elbows.	Front position.
"	Twisted left.	Good position.
Girl.	Sliding down. Shoulders twisted.	Forward, chest flat.
"	Twisted left.	Front, shoulders uneven.
"	Forward, feet crossed back.	Good position.
"	Forward on left elbow.	Forward, shoulders uneven.
"	Twisted. One shoulder higher.	Front, chest flat.
"	Good position.	Forward position.

The next chart, made under similar conditions, is typical of several reports.

Study. 11.40 A. M. Thirty minutes.

	Cloudy. 68°.	Fair. 68°.
Girl.	Pelvis front. Shoulders twisted.	Twisted.
"	Twisted, on one elbow.	Good.
"	Twisted.	Good.
"	Front, on one elbow.	Forward.
"	Legs crossed, one foot in desk irons.	Good.
"	Good	Good.
"	Front, on one elbow, shoulders uneven.	Front. Chest flat.
"	Twisted. Shoulders uneven.	Front. Sitting on one foot.

Hence, from the observations, weather certainly seems to affect posture. Because of the evenness of the temperature records, no idea as to its effect alone can be given. Likewise, the length of study or recitation period is so uniform that no effect upon posture is indicated except for these two lists, which are interesting because of the length and evident management of the period.

10 A. M. Grade II.

	Reading from board (3 min.).	Reading from books (5 min.).
Boy.	Elbows on desk. Feet crossed.	Shoulders rounded.
"	Bending left.	Sliding down.
Girl.	Good.	Good.
"	Twisted right, on one elbow.	Good.
Boy.	On right elbow. Feet in desk irons.	Good.
"	Twisted, on one elbow.	Absent.
Girl.	Absent.	Absent.
"	On both elbows. Shoulders forward.	Good.

Scientific investigation upon fatigue has shown that for most pupils the morning hours are better than the afternoon. But, so far as faulty position is concerned, it is not so much the time of day as the subject that affects the pupil's attitude.

Kotelmann tells us that languages, history, and mathematics are most fatiguing because of the memory and reasoning involved. Nature work and geography, when illustrative, may be recuperative, while arts like drawing and singing are least fatiguing. I am unable to give illustrations of all the above subjects from the same class, but the two following reports would indicate somewhat of a coincidence with Kotelmann's view:

Grade IV. Record taken on different days.

	Picture lesson, 10 A. M. Fair (20 min.).	Music, 2.40 P.M. Cloudy (20 min.).
Boy.	Good.	Good.
"	Pelvis front. Shoulders twisted.	Good.
"	Good.	Good.
"	Twisted.	Good.
Girl.	Good.	Good.
"	Good.	Good.
"	Twisted.	On left elbow.
"	Good.	Good.

	Language, 2.40 P. M. Fair (30 min.).	Study, 2.40 P.M. Cloudy (20 min.).
Boy.	Twisted.	Twisted, on one elbow.
"	Twisted.	Good.
"	Good.	Good.
"	Twisted, on both elbows.	Good.
Girl.	Twisted, on one elbow.	On both elbows.
"	Chest flat. Shoulders rounded.	Sitting on left foot.
"	Absent.	Twisted.
"	Twisted, on left elbow.	Twisted.

Grade IX. Record taken on different days.

	Physics, 2.30 P. M.	Drawing, 2.30 P. M.
Boy.	Good.	Feet crossed.
"	Good.	Shoulders forward.
"	On left elbow.	Good.
"	Good.	Legs braced back.
Girl.	On left elbow.	Side position, knees crossed.
"	Good.	Twisted.
"	Good.	Side position, knees crossed.
"	*Good.*	Twisted.

Study, 2.30 P. M.

Boy.	Twisted, on both elbows.	Girl.	Twisted. On both elbows.
"	On right elbow.	"	Twisted. On right elbow.
"	Chest flat. Shoulders forward.	"	Good.
"	Absent.	"	On left elbow.

Statements made last year as to faultiness of posture in busy-work or sewing are emphasized by observations this year as follows:

Grade I. Record taken from different classes.

Busy-work.

	10.30 A. M.	11.30 A. M.
Girl.	On left foot. R. knee in desk.	On right foot. Bent left.
Boy.	Twisted. On right elbow.	Bending left.
Girl.	Flat chest. Shoulders rounded.	Twisted. Bent left.
Boy.	Good.	Bent left. L. knee in desk.
Girl.	Left knee in desk.	On elbows. Chest flat.
Boy.	Good.	On elbows. R. knee in desk.
Girl.	Sitting on both feet.	Absent.
Boy.	Flat chest. Shoulders rounded.	Bending left.

3.30 P. M.

Girl.	On elbows. Chest flat.
Boy.	Chest flat. Shoulders rounded.
Girl.	On right foot. Leaning on elbows.
Boy.	Bending left. On left elbow.
Girl.	Twisted. Chest flat.
Boy.	On elbows. Bending left.
Girl.	Sitting on left foot.
Boy.	*On elbows.* Left knee in desk.

History of Education.

The following article is by permission reprinted, with some omissions, from *Mosher's Magazine*. It treats educational development from an avowedly Roman Catholic point of view. The purpose is to explain the motif of Catholic education. The non-Catholic will be interested in it particularly for the fair historical resumé it gives of education in the Christian era. The fact that the writer is professedly a Roman Catholic adds, in a measure, to the value of the article, as most histories of education are written in an unmistakably Protestant spirit and fail to properly recognize the important services to the cause of education, which Dr. Pallen magnifies. The student of history will readily appreciate the peculiar value of the article.

The Motif of Catholic Education.*

By CONDÉ B. PALLEN, LL.D.

AT the time of the advent of Christianity into the world the older type of Roman education had disappeared, the old political education akin in purpose to that of elder Greece prior to the period of decadence. Its scope was to fashion the capable citizen to train and prepare the child for the duties and functions of civic life. The state as the end of human living, both in Greece and early Rome, was the vital principle of all individual and public action. The conservation and the welfare of the state were the substance of their religious cults. Education was directed and inspired by that aim ; it was definite, vital, and purposeful, and accomplished its end with a success which has left a distinct and luminous mark in the history of mankind. But this primitive political education had been superseded by encyclopædic education which Rome had adopted from decadent Greece long before the Christian dispensation had spread among the nations. With the extinction of the autonomy of the Greek cities perished the system of political education. In its stead arose encyclopædic education ; a type which proclaimed education for education's sake, culture for culture's sake. When Rome ceased to be republican and became imperial, when the spirit of her ancient simplicity was corrupted by the luxury of dominion, and the stern example of her Catos had lost the active virtue of typical models for Roman statesmen, the ancient and the virile type of her political education yielded to the deleterious influence of the Greek importation. Roman education ceased to have a definite purpose; it no longer aimed at the training of the citizen, but merely at fashioning the votary of culture.

Such was the general educational condition of the Roman world, whose rule was then universal, when the Church entered upon her mission, as commanded by her divine Founder, to go forth to teach all men and all nations. The encyclopædic system was in universal vogue; it was steeped to the lips in paganism; it had lost the virility of the ancient discipline; it had nothing of the ancient integrity of the primitive political education, in which at least the civic virtues had flourished in view of the civic end enjoined.

The divine commission to the Church to teach was not directly and formally pedagogical, but indirectly and by implication that commission includes the education of all mankind, in the highest and fullest significance of the word. By inference, education, in the sense of pedagogical training, is a function of the Church; and she has acted upon this conception of her ministry from the beginning. With her the school has always been the vestibule of the Church. It is true that, at the outset, she did not, for she could not under her primitive, untoward conditions, act upon this in all the fullness which subsequently characterized her pedagogical activity. But even in the days of her persecution, when her children were hunted, driven, and aughtered like the beasts of the field for Christ's sake, she entered upon the duties of the pedagog and sowed the seeds of an educational system which was destined, not only to revitalize all that was good in the Greek and Roman systems, but to create pedagogy anew by giving it a scope and an end as much higher, broader, and completer than the ancient systems of paganism as Christianity transcends Greek and Roman civilization in all that makes for the temporal and eternal welfare of mankind.*

When the Church set out upon her mission to teach all nations, and regenerate the peoples of the world she necessarily came into contact and, in large measure, into conflict with that vast body of doctrine which the ancient civilization had elaborated into a philosophic and educational system † This conflict was at first waged in the concrete, with the powers of the state, and issued in the Christian persecutions. The Christian franchise of the liberty of the sons of God, which was the gift of truth, was essentially incompatible with the despotism of the empire. Caesar felt by instinct that the subtle and intangible power of Christianity was a menace to his own domination. He therefore sought to sweep the Church away in the blood of her own children.

But it was not long before that conflict entered into other spheres. In the speculative order Christian revelation met the philosophies of paganism. The defense, exposition, and explication of the body of Christian truth grew and expanded as the lines of battle variously shaped themselves thru the centuries. In all this was necessarily implied an educational process which would lead up to a maturity and equipment of mind equal to the conflict. The Church must teach and train to that purpose; she must assume the duties of the pedagog.

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*See Rev. Eugene Mageveney, S. J., "Christian Education in First Centuries." New York: Cathedral Library Association.

† See Allies, "Formation of Christendom," Part III.

The truth she taught stood in sharp contrast with the medley of pagan doctrines around her. Pedagogy was a logical and imperative necessity ; was and always will be ; she therefore, according to her circumstances, began the foundation of schools.

In the beginning the Church's teaching was domestic. The family was the school.[*] The parents, as far as in them lay, educated their children. This far her educational system resembled that of early Rome—the political education which had built up the stern and admirable character of the fathers of the republic. But this did not, of course, suffice ; the exigencies of the situation demanded and the opportunities of changed circumstances offered an amplification of the earlier methods. By the end of the second century we find a well-defined system of Christian schools in operation, the seed of which was the catechetical school founded by St. Mark, the evangelist, at Alexandria, in the sixth year of Nero's reign and the sixtieth of the new dispensation.[†] At first of a purely religious character, St. Mark's foundation, under the fostering care of his successors, developed into an institution of lower and higher learning embracing all the branches of the period. Elsewhere thruout the empire rose Christian schools modeled upon the Alexandrian exemplar. These institutions, indeed, enjoyed no unbroken peace, and suffered from all the vicissitudes which the stress of persecution brought upon the Church of the first three centuries.

It is not to be supposed, however, that these early schools were so plentiful or so prosperous as to fulfill all the needs of education in their day, and to accommodate all the faithful. They did not exist everywhere, and where they did exist they were not always available to all nor for all purposes. The Church must needs educate her own clergy in an especial manner for their sacred vocation. Out of this need grew up the episcopal or cathedral schools.* From the beginning it was an apostolic tradition, after the example of the Twelve themselves, to gather the aspirants to the ministry in the house of the bishop for that training and instruction which might fit them for their sacred office. At first the curriculum of studies was confined to ecclesiastical subjects, but, as time grew, the exigencies of new conditions, and the natural development of the character of theological subjects confronted with the learned paganism of those days, brought about a more amplified plan, until the episcopal school embraced, not only those branches of studies which were formally ecclesiastical, but likewise all that was included in the literary education of the times.

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[*] Mageveney, "Christian Education in First Centuries," p. 9.

[†] Newman, "Historical Sketches," Vol. III., Chap. VIII. ; also Allies, "Church and State," p. 255 ; Drane, "Christian Schools and Scholars," Chap. I.

As the episcopal schools grew and developed another type of educational institution arose, destined to become later on, in an especial manner, the great teaching force of the Church. The cathedral schools had as their specific end the training of the clergy. The laity, for obvious reasons, rarely enjoyed the advantages of those institutions. To meet the need of the laity and to withdraw the faithful from the pernicious influence of the paganized public schools of the empire, the monastic schools began to spread. After the advent of St. Athanasius to Rome in the middle of the fourth century, the monastic institution, which had grown up in the East, multiplied rapidly thruout the West. It possessed a twofold system of schools, the interior and the exterior; the former for the education of those who entered upon the monastic life, the latter for the laity. Within a century the monastic schools were numerously planted, and flourished in Italy, Gaul, Britain, and Ireland; and when the Empire of the West fell, crumbling under the sledge-hammer blows of the barbarian invaders, it was in the monastic institution that science and letters found their only secure shelter. When the eclipse of learning came in the darkness of the fifth and sixth centuries on the continent, the monastic institutions in Britain and Ireland, free from the stress of the storms raging on the continent, not only preserved the ancient learning, but fostered and developed a system of culture which was both brilliant and substantial for those days.*

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* See Newman, "Idea of a University," p. 241; also *Mageveney,* "Christian Education in First Centuries," pp. *931, ff.*

With the dissolution of Rome came social and civic chaos in Europe. Society was in a maelstrom of ferment and change. It took some three centuries to bring order and stability out of the chaos. A new element had entered into the fabric of European society. Rome and its civilization had passed forever. A new formation was taking place out of barbarian elements; a new civilization was in travail. It was being fashioned on a new ideal absolutely transcending the ancient. Education was to be organized and energized on the new lines. The spirit of the old encyclopædic system had passed away; the framework remained. The old framework was to be seized upon and animated by the new ideal, which had been slowly and laboriously working its way thru the corrupt social body of the dying Roman world. With the death of the Roman body that ideal was freed from the ancient trammels; with the advent of the barbarians it met with new obstacles and new difficulties, but these, in the order of Providence, were to be transformed into instruments of its triumphs.†

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*See Drane, "Christian Schools and Scholars," Chaps II. and III.

†*See Allies, "The* Wandering of the Nations," Chap. I.

The political education of early Greece and Rome had been vital and effective; it was based upon an ideal and energetically achieved its end. The encyclopædic system which followed possessed no ideal and had no definite end. It was mere education without scope or object. The older system had its purpose, the making of the citizen; it was understood to be a means to a definite end, and it was so conducted. The educational system of the Church was akin to the political education of the ancient republic; it also rested upon an ideal and had a well defined end in view; its purpose was to train the citizen—not the citizen of a temporal polity, like that of Athens or Rome, but the citizen of the city of God. Here was an ideal utterly transcending the ancient. The ancient ideal had been temporal and particular; the new ideal is eternal and universal. As long as Rome lasted and her influence predominated in the Western world, so long would the incubus of the apathy, which had seized upon her body going the way of death, weigh upon and retard the free play of the new ideal in the practical order. The barbarians had no educational system, no tradition, no ideal; and in so far as they lacked an ideal, just so far were they incapable of receiving any educational advancement. It was first necessary to create an ideal among them before there could be hope of any systematic educational movement. They had destroyed the elder civilization; or, rather, they had fallen upon it as a legitimate prey at the moment of its apathy;* and civilization had to be made over anew, not upon the old lines, but upon foundations set deep enough in eternal principles to carry the superstructure whose pinnacles towered into the empyrean of a divine faith.

. . . .

In the eighth century, under Charles the Great, the revival began. At the invitation of the emperor and under liberal patronage scholarly masters flocked to the continent from Britain and Ireland, laden with the sweets of learning garnered there in peace during the centuries of turmoil which had afflicted the rest of Europe. The emperor and his family set the laudable example of becoming pupils in the great palace school. Edicts were issued in the interest of learning and the subjects of the empire were commanded to promote the new educational movement. Schools were founded wherever possible. Under the guidance of the famous Alcuin the movement rapidly spread and flourished. The political stability of Eurpoe being assured under the firm hand of a master like Charles the Great, the cause of learning at once revived and put forth shoots of promise. Blasted by three centuries of social and civic devastation the tree of culture had withered and shrunk until only its roots retained a hidden vitality beneath a soil encumbered with the ruins of a fallen civilization and wasted by the incessant harries of barbarian wars. It needed, however, but the cherishing touch of the hand of peace to send forth shoots again and bud once more under the tender and solicitous care of Christianity.

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* *Cf.* De Quincey, "Philosophy of Roman History," in *Historical Essays;* also Courthope, "History of English Poetry," *Chap. II., p. 20.*

The monastic institution, transplanted in the fourth century from the Orient to Europe, had become a permanent and widespread system, and under its safeguard, letters found shelter. Monasticism was the cradle and the ark of learning during the period of storm and the subsequent development. Happily England and Ireland had been spared the frightful havoc of the barbarian invasions, and from these islands of the West, as from a fresh and limpid spring, issued the stream of learning to again fructify the long uncultivated soil of the continent.*

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*See Newman, "Benedictine Schools," in Historical *Sketches, Vol. II.*

From this period date the beginnings of the great mediæval educational movement; for tho, temporarily interrupted by the disorders of the tenth century, following the dismemberment of Charlemagne's empire, the educational system of the Middle Ages has its foundation and takes its character from Charlemagne's institution. The framework of the Roman encyclopædic system was retained. The trivium and quadrivium of the seven liberal arts formed the method of the curriculum. But, unlike the encyclopædic method, education was no longer mere education. While encyclopedic in its mode, it was political in its spirit and scope; its purpose was to train and develop the citizen of the city of God, the member and subject of the kingdom of Christ. Not merely Athenian or Roman was its citizen to be, but Christian. Neither Greek nor Roman, nor Gentile nor Jew was to be there met with; its citizenship transcended all these; therein all men were to be brethren.*

Aspiration was the dominant note of mediæval education, as it was of mediæval life. That life was deeply and intensely spiritual, working in and thru gigantic elements, forming and fashioning masses of rugged people into one vast polity, and yet differentiating into a variety of divergent expressions. While it aimed at one dominant unity, it diversified into many varieties, each in its own way exemplifying that unity. The Gothic cathedral, its own peculiar creation, is typical of its spirit; here are fundamental massiveness soaring into the finest lightness of aspiration, and unity of plan with an endless variety of expressive detail; its dominant trait aspiration, a reaching upward and beyond, yet deeply and substantially founded below. Scholastic philosophy, which

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*For account of schools of Charlemagne see Newman, "Idea of a University," Chap. XIII.; also Drane, "*Christian Schools and* Scholars," Chap. VI.

is also the elaboration of this period, evinces the same elevated character. Its basis is the Aristotelian system, broad and deep in the fundamentals of human reason, but lifted and carried up far beyond the Aristotelian substructure. . . . In scholastic philosophy, as the intellectual fruit of these ages, we have evidence of the educational activity of the middle period. The vigor of the schools in the speculative world was as great as the social and architectural energy of the age. By this time the monastic institution had reached its apogee. With its growth the life of letters expanded. Monascism flourished thruout all Europe, and herein was the center of the educational development of the day. Monasticism was the hive of learning, and from it flowed the richness of the stream of letters over all the land.*

Out of this fertile soil rose the great banyan tree of the university system. Universities sprang up in the great centers; students by thousands flocked to them. Intellectual life grew phenomenally; the student became as distinctive and familiar as the soldier in the life of the period.† The speculative ferment grew apace. In the thirteenth century the universities had become the great organs of education. The character of mediæval university education is made manifest in Dante. The vast scope of its conception and its spiritual intensity are revealed to us in the "Divina Commedia." In this great poem the state of learning is accurately and substantially set forth, not as a formal exposition, but as living fiber in the make-up of the work. Dante was clearly well-versed in the physical sciences of his times, tho their development at this period was extremely crude. But it is in theological and philosophical science, coupled with a profound spiritual insight and reach, that the poem is luminously typical of his age.

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*See Vaughan, "Life of St. Thomas," Chaps. XXIII. and XXIV.

†See Vaughan, "Life of St. Thomas," Chap. XVI.; also *Newman, "Idea of a* University," Chap. XIV.

Dante's knowledge is accurate, precise, and yet comprehensive. In him are manifest a well-poised mind, a balanced judgment, faculties thoroly trained and drilled; what in the fullest sense of the word is to be called an educated mind. With an imagination so vast that it ranged the very confines of the universe from deepest hell to highest heaven, yet he is never vague or indefinite; in his profoundest mysticism he is ever accurate and precise. The entire scheme of the "Divina Commedia" is planned according to measure, weight, and number; the proportions of the "Inferno" are given foot for foot. And, notwithstanding all this minuteness of detail, the imaginative power, which is essentially the poet's faculty is never minimized or weakened; its flight is always vigorous and large, its heat intense, its coloring harmonious.

In Dante the man, and in the "Divina Commedia" the work, we have the ripe fruit of the political education of the Church. In the man we have the enfranchised citizen of the city of God, with his eyes on eternal things as the finality of all human living and endeavor, using the things of this world as stepping-stones to the higher things, thoroly trained in all his powers, well-versed in the arts and sciences of his day, imbued to the very core of his soul with the tremendous sense of the right performance of his duty here as the means to his welfare hereafter; his conscience freighted with the responsibility of his power of freedom, upon whose correspondence with the divine gift of grace depends his eternal salvation. The "Divina Commedia" sets forth a deep and comprehensive spiritual insight into the divine scheme of the universe; the harmonious concatenation of human and divine things; the reconciliation of human reason with the sublimity of faith; human philosophy illuminated by the light of revealed wisdom; all the relations of human living made clear and definite in the high knowledge of faith, which has as its beginning and its end the eternal Love, the source and aim of creation. Man's domestic, social, civic, and religious life here takes on an infinite meaning; under this penetrating light there is no duty, no detail of human living, which escapes illumination; here is no room for doubt, hesitation, difficulty; life is all action, explicitly set forth in its final end and aim.

The Middle Ages were dominated by this supreme idea. The period was essentially one of vast and gigantic activity; it strove largely, earnestly, and untiringly after a great ideal, placed before it in distinct and comprehensive outline. This was the principle on which it built the great cathedrals, generation after generation toiling at each of them, irrespective of its own temporal realization of the result, toward the great end, which was as clearly before the minds of those who laid the huge foundations as it was to be in actuality to those who should cap the myriad pinnacles in the far-off century which was to witness the consummation of the vast work.

All this was the result of that political system of education of the Church which held aloft a supreme and eternal ideal; for men never work better in time than with a view to eternity. This was not mere education. The Church's system achieved its results because it possessed a great and lofty ideal; it had a definite end, a clear-cut and concrete object to attain; its scope was universal and eternal. It brought its purpose home to every individual soul, formed every conscience, excused none and held all to the vast consequences of their responsibilities.

(*To be continued.*)

The Rhode Island Institute of Instruction

IT has already been mentioned that the American Institute of Instruction was organized in 1830. In 1845 the friends of education in Rhode Island—teachers, lawyers, clergymen, and business men—organized, what has practically ever since, been a state teachers' association. The name adopted, patterning after the name of the parent society, whose constitution in a large measure it adopted, was the Rhode Island Institute of Instruction. This institute at once undertook, thru Dr. Henry Barnard, the establishment of a periodical devoted to the interests of education, the first number of which appeared November 15, 1845. The "Committee of Publication" consisted of John Kingsbury, Thomas C. Hartshorn, Nathan Bishop, and Amos Perry. The paper was called *The Rhode Island Institute of Instruction* and was under the editorial care of Dr. Barnard. The first volume was completed in June, 1846, and consisted of fourteen numbers, embodied in two hundred and fifty-five pages, to which were added thirteen numbers of extras, comprising two hundred and fifteen pages, and "Educational Tracts" of one hundred and forty-one pages, making in all six hundred and eleven pages. A pretty formidable volume sold for the low price of fifty cents. The second and third volumes appeared under the same name and were of the same character, altho somewhat larger than the first volume. The publication was interrupted by Mr. Barnard's withdrawal from Rhode Island to become superintendent of the public schools of Connecticut.

The services of Mr. Barnard as school commissioner of Rhode Island from 1843 to 1849 was of the most vigorous character and of the greatest value. He was an earnest, devoted, efficient, and a radical reformer. This periodical, like the *Common School Journal*, of Horace Mann, was "his right arm" for both defensive and offensive efforts. The three volumes discuss school architecture, with numerous illustrations of exterior views and floor plans of school-houses, school equipments, and apparatus, such as desks, seats, gymnastic apparatus, methods of ventilation, lighting, heating, etc. They furnish the school laws of the state at that time, accounts of teachers' institutes, other meetings, articles upon the duties of parents, ethical teaching in schools, school motives, and school vices, Normal schools, and teachers' institutes, reports of various superintendents from different cities and different states, lectures and papers on a variety of topics.

Rhode Island "Educational Magazine."

Mr. Barnard was succeeded by Hon. Elisha Potter as school commissioner of the state, who published, in 1852, a periodical with the above title. The periodical became the repository of school documents, changes in school laws, decisions on the construction of law, information of educational meetings and their proceedings, and such other reading matter as would interest and instruct. The magazine was supported principally by the private contributions of gentlemen interested in advancing the cause to which it was devoted, and it was sent gratuitously to the chairman and clerks of school committees and to the clerk of every school district. In this manner important information was widely diffused and much good accomplished.

The Rhode Island School Master.

Mr. Potter retired from his office in 1854 and Rev. Robert Allyn was his successor. Mr. Allyn held the office for three years. He had scarcely entered upon his duties before he became convinced that a teachers' journal was a necessity. The same thought occupied the minds of several of the leading teachers of the state.

At the meeting of the Rhode Island Institute held in *Providence, January 27,* 1855, at which the writer of this article was present, a committee was appointed to consider the expediency of establishing an educational journal. That committee reported as follows:

> Resolved, that a committee of six be appointed to consider the expediency of establishing an educational journal in this state.

The resolution was passed and the following gentlemen appointed, viz.: Messrs. Tallman, Colburn, Gallup, Allyn, Vail, and Potter. The committee reported the following resolutions which were adopted, viz.:

> Resolved, that it is desirable that an educational journal be established in Rhode Island.
>
> Resolved, that in order to secure the highest efficiency and usefulness of such a journal it should be under the editorial supervision of the commissioner of public schools.
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> Resolved, that the commissioner be requested to consider this subject, and, if he deem the establishment of an educational periodical expedient, to take measures to commence its publication at an early period.
>
> Resolved, that it is the duty of the friends of education in this state to give their hearty support to such a journal whenever established, and we, teachers of Rhode Island, pledge ourselves to cordially co-operate with the commissioner in this important undertaking.

In response to a vote of the Rhode Island Institute the first number of the *Rhode Island School Master* was issued in March, 1855. It was a monthly periodical, octavo, thirty-two pages in each number. Its subscription price was one dollar a year. It was popular in style and its articles, which were principally short, embraced a great variety of subjects. There were school stories, a scholars' department, questions and problems, mathematical and otherwise, school jurisprudence, editorial articles, book notices, and "all sorts of things."

Mr. Allyn edited the magazine, assuming the entire financial risk of its publication until he resigned his office and left the state in September, 1857. The writer *(William A. Mowry)* then purchased the magazine from him, and edited and published it until January, 1860. At this time it became the organ of the Rhode Island Institute of Instruction. A board of twelve editors was appointed as follows: Henry R. Pierce, of Woonsocket; N. W. DeMunn, of Providence; Thomas Davis, of Pawtucket, A. J. Foster, of Westerly; Amos Perry, A. W. Godding, William A. Mowry, John J. Ladd, of Providence; Isaac F. Cady, of Warren; N. E. Cook, of Bristol; Francis B. Snow, Albert J. Manchester, of Providence. Cooke and Danielson, the owners of the Providence *Daily Press*, became the responsible publishers. In January, 1861, John J. Ladd and N. W. DeMunn were appointed as resident editors with a board of twelve contributing editors.

In January, 1862, a new departure was made by appointing a long list of contributing editors and assigning to each a particular subject. This arrangement was continued for several years. The number for March, 1869, gave notice that "The present number of the *Rhode Island School Master* is the last—at least for the present." The difficulty seemed to be that no proper arrangement could be made for editing it. In October of that year its publication was revived by Hon. Thomas W. Bicknell, who had lately been appointed commissioner of public schools for the state. Mr. Bicknell now assumed the entire financial control and for the next two years it was edited by T. B. Stockwell and T. W. Bicknell.

The volumes for 1872, 1873, and 1874 were under the exclusive control of Mr. Bicknell. It still continued to be the organ of the Rhode Island Institute of Instruction, and this body annually appointed a board of contributing editors as heretofore. The December number for 1874 completed twenty years of its publication. At that time it was merged with the other teachers' journals of New *England in the New England Journal of Education*.

The *Massachusetts Teacher* had been published twenty-seven years, and the *Rhode Island School Master* twenty years. These two state journals stand out conspicuously among the journals of the New England states. They did not furnish the strong meat which had characterized the *American Journal of Education*, or the *Common School Journal*, but they had appealed to the teachers of the common schools, had created among them a laudable ambition for improvement, had suggested better methods of instruction, better ideals of education, and established a higher type of school management and discipline. They did yeoman's service in their respective states in the cause of public education. They now gave way to a better plan in the union of forces upon one journal and that to be issued weekly and to cover the ground for all New England.

The Connecticut Common School Journal.

Hon. Henry Barnard was secretary of the board of school commissioners in Connecticut from 1838 to 1842. On entering upon the duties of his office he at once saw the necessity of having a medium of communication upon school matters between him and the people. He, therefore, established the *Monthly Connecticut Common School Journal* which he published, edited, and owned, during these four years. It was chiefly intended to contain the school laws of the state and all such information concerning educational matters as the school officers and teachers should need.

When Mr. Barnard removed to Rhode Island to become the school commissioner for that state, this periodical ceased. On his return to Connecticut as superintendent of the schools of the state in 1850, he re-established the *Journal* and conducted it as before until 1854. At that time it was turned over to the Connecticut State Teachers' Association which appointed an editorial committee. This action was brought about at the annual meeting of the State Teachers' Association in 1853.

The first board of editors under this new arrangement consisted of Hon. Henry Barnard, Hartford; Prof. John Brocklesby, Trinity college, Hartford; Prin. T. W. T. Curtiss, of the Hartford high school; David N. Camp, State Normal school, New Britain; Rev. E. B. Huntington, of the high school, Waterbury; Prof. John Johnston, Wesleyan university, Middletown; F. B. Perkins, Hartford; E. A. Lawrence, of the high school, Stamford; Prof. T. A. Thatcher, Yale college, New Haven, and Prin. John D. Philbrick, of the normal school at New Britain. This board of editors was changed more or less from year to year.

The publication was a monthly octavo, thirty-two pages in each number, and was published at one dollar a year. John D. Philbrick was the first resident editor. After several years Charles Northend became the editor, and later David N. Camp. The journal was fairly well sustained by the teachers of the state, tho never a source of profit to the association. Frequent deficiencies in the funds for its publication were made up by contributions from leading teachers of the state. It proved to be an important aid to the state department of education as well as to the local school officers and public school teachers. For several of the later years of its publication a small appropriation was made by the state, in return for which the journal was sent to the school visitors of every town. This journal, with others, was merged in the *New England Journal of Education*, January 1, 1875.

Barnard's "American Journal of Education."

Up to this point the various educational journals which we have considered have been local in character and designed rather for the common school teacher, with the intention of improving the methods of instruction and elevating the schools of New England. Hitherto, no effort had been successful in producing a magazine of high character which should grapple with the great philosophical problems that surround the whole subject of education. Indeed, few men have been produced in this country with sufficiently broad views and accurate, to gather the necessary information and to discuss the fundamental principles upon which the success of education is to be built.

Hon. Henry Barnard, LL.D., from his experience as commissioner of education in Rhode Island and superintendent of the public schools of Connecticut, from his extensive travels in Europe and careful study into the principles developed and methods put in practice in the schools and educational institutions of Great Britain and the leading countries of Europe, together with his keen insight, his habit of accurate thought, his power of systematic generalization and analytic discrimination, was early acknowleded to be the man of America to undertake successfully the difficult task of editing an *American Journal of Education* which should be worthy the name, and which should prove an honor to American education.

Dr. Barnard's experience with the *Connecticut Common School Journal* between 1838 and 1842 convinced him that a monthly or quarterly magazine devoted exclusively to the history, statistics, and discussion of systems, institutions, and methods of education in different countries, but with special reference to the condition and needs of our American system of education, was highly desirable. During many years he collected a large amount of material, some of which he published in separate pamphlets. He endeavored at one time to enlist the aid of the American Institute of Instruction, but it had no money to devote to such a purpose. He made various efforts to secure the co-operation of the Smithsonian institution, but without success. He presented the subject to the American Association for the Advancement of Science, but that organization felt it necessary to confine its work to the more restricted department of scientific investigation. Finally he determined to undertake the publication, upon his own responsibility, of such a magazine which should prove a complete library of education.

At about this time he discovered that the Rev. Absalom Peters, D.D., had in mind the project of establishing a periodical to be called the *American College Review and Educational Magazine.* Dr. Barnard joined forces with Dr. Peters, and they together as co-editors, began the publication of *The American Journal of Education and College Review.* The first number was published in August, 1855, and contained 153 pages. The second number did not appear until January, 1856, and contained ninety-six pages. Among the articles in the second number was the famous one on "Unconscious Tuition," by Dr. F. D. Huntington, of Hartford.*

After the publication of these two numbers it became evident that the two editors had such widely divergent views as to what a periodical of this high character should be that it was clearly desirable that they should divide their work. Dr. Peters, therefore, withdrew from its publication, and Dr. Barnard assumed entire charge of the work and continued it on its original plan.

The third number, therefore, was published in March, 1856, under the title of *The American Journal of Education.* This number contained one hundred and eighty pages and was illustrated by a steel portrait of George Peabody, an engraving of the new high school building at St. Louis, with wood cuts illustrating that new building. The magazine now took a wider range of topics. Among the articles in this number was one on "Education Among the Hebrews, by Rev. Morris P. Raphall, and one on "Progress of Educational Development in Europe," by Dr. H. P. Tappan, chancellor of the University of Michigan. There were other strong contributions and extensive notes on educational matters, including tables of publication of the United States statistics, libraries, educational news from various states and foreign countries, etc.

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* A reprint is included in the Teachers' Manuals series *published by E. L. Kellogg* & Company.

The new journal was fairly launched. The fourth number was issued in May, and the first volume was completed by a variety of supplementary papers, making in all a volume of seven hundred and seventy-six pages. This and subsequent volumes were published by F. C. Brownell, Hartford, Conn. Its price was fixed at three dollars a year.

The second volume contained three numbers, regularly published in August, September, and December, 1856. The entire volume consisted of seven hundred and fifty-six pages, including a wide range of subjects, historical, biographical, philosophical, with educational intelligence from this country and foreign lands. It was enriched with steel engravings of distinguished personages and cuts with plans of educational institutions.

The third volume was published in two numbers, the first in March, 1857, containing two hundred and eighty-eight pages, the next number in June of that year, carrying the folios, including the index to eight hundred and twenty-four pages.

The fourth volume was a great improvement upon its predecessors in breadth and scope of its contents. Its eight hundred and forty-four pages were comprised in three numbers which were issued September and December, 1857, and March, 1858. The work was now thoroly established and received from every quarter the highest encomiums for its wide scope and philosophical character. Its numbers were so large, with such a variety and quantity of material, that they could not be published with absolute regularity of time. The arrangement was not always the best. In the main it has been quarterly. The work has extended to between thirty and forty volumes, each containing from six hundred to eight hundred octavo pages of important matter embracing all the departments of educational work.

Dr. Barnard's services as editor of this famous quarterly has given him a world-wide reputation as one of the most distinguished educators of this century. The *Journal* as a whole is a great encyclopedia of knowledge, of facts, of principles, of philosophy upon all departments of education, and its strength and solidity have won, both for it and its editor, the highest testimonials from the best educators of many lands. It is without a peer in the breadth of its discussion of systems, institutions, public schools, private schools, technical and special schools, and the history, biography, and philosophy of educational matters. It has been thruout its whole history edited by Dr. Barnard and published in Hartford, Connecticut, but it is thoroly national in its character and perhaps as highly appreciated in Europe as in this country.

(To be continued.)

A cablegram reports the death of Mrs. Alice Freeman Palmer, on December 6, at Paris. She was born in Colesville, N. Y., in 1855; graduated from the University of Michigan; taught successively at Lake Geneva, Wis.; Saginaw, Mich.; and Wellesley college; from 1881 to 1887, she was president of the latter institution; later, she acted as dean of the Woman's Department of the University of Chicago. She was the commissioner of Massachusetts to the World's Fair at Chicago, a member of the Massachusetts state board of education, president of the Woman's Educational Association of Boston, trustee of Wellesley college, president of the corporation of the Institute for Girls, in Spain, and held many other positions of responsibility and honor. She was the wife of Prof. George Herbert Palmer, of Harvard university. This wonderful woman will be greatly missed, for she lent the power of her influence to many progressive movements for the betterment of the public schools.

Pedagogical Classics.

Jean Paul Richter's "Levana." II.

Extracts from Jean Paul Friedrich Richter's "Levana; or The Doctrine of Education."

Spirit and Principle of Education.

THE end desired must be known before the way. All means or arts of education will be, in the first instance, determined by the ideal or archetype we entertain of it.

The man comes before the citizen, and our future, beyond the world as well as in our own minds, is greater than both.

Education can neither entirely consist of mere unfolding in general, or, as it is now better called, excitement—for every continued existence unfolds, and every bad education excites, just as oxygen positively irritates—nor in the unfolding of all the powers, because we can never act upon the whole amount of them at once; as little as in the body susceptibility and spontaneity, or the muscular and nervous system, can be strengthened at the same time.

Every one of us has within him an ideal man which he strives, from his youth upwards, to cherish or to subdue.

The ideal man comes upon the earth as an anthropolithe (a petrified man); to break this stony covering away from so many limbs that the rest can liberate themselves; this is, or should be, education.

Individuality of the Ideal Man.

If, in general, every man is secretly his own copying machine which he applies to others, and if he willingly draws all into ghostly and spiritual relationship with him*self as soul's* cousins—as, for instance, Homer gladly converted the four quarters of the world into Homerides and Homerists, and Luther into Lutherans—much more will the teacher strive in the defenceless, unformed souls of children, to impress and reproduce himself; and the father of the body endeavor to be also the father of the spirit. God grant it may seldom succeed! And most fortunately it does not prosper! It is only mediocrity which supplants that of others by its own; that is, one imperceptible individuality by another equally imperceptible; hence the multitude of imitators.

If a human being be once thrown out of his own individuality into a foreign one, the center of gravity that held together his whole inner world becomes movable and wanders from spot to spot, and one oscillation passes into another. In the meantime the teacher has to separate from the individuality which he allows to grow another which he must either bend or guide; the one is that of the head, the other that of the heart. Every intellectual peculiarity, be it mathematical, artistic, philosophical, is a beating heart, which all teaching and gifts only serve as conducting veins to fill with material for working and motion. At this exact point more weight may be added to the preponderating weight of natural disposition; and the teacher must not give in the morning of life a sleeping draught—say to peculiar talents for art. The moral nature, however, must be quite differently treated; if that be melody, this is harmony; you must not enfeeble an Euler by engrafting on him a Petrarch, nor the latter by the former; for no intellectual power can become too great, and no painter too great a painter. But every moral faculty needs to have its boundaries fixed in order to the cultivation of its balancing powers ; and Frederick the Great may take his flute, and Napoleon his Ossian.

Let it be a law that, as every faculty is holy, none must be *weakened in itself*, but only have its opposing one aroused, by which means it is added harmoniously to the whole.

So, for instance, a weakly affectionate heart must not be hardened, but its sense of honor and purity must be strengthened; the daring spirit must not be rudely checked and made timid, but only taught to be loving and prudent.

To elevate above the spirit of the age must be regarded as the end of education; and this must stand clearly developed before us ere we mark out the appointed road. The child is not to be educated for the present—for this is done without our aid unceasingly and powerfully—but for the remote future, and often in opposition to the immediate future.

If man, from the observation of three quarters of the globe could not prophetically construct the fourth from the combinations of matter, far less can he divine a future from the more complicated ones of spirit. For man is feeble and poor; his star-reading of the future—a mere strengthening or weakening of the present—sees only a crescent moon in the sky, which waxes and wanes in unison with himself, but no sun. Every one regards his own life as the new year's eve of time, and also, like the superstitious, his dreams, woven from memories, as prophecies for the year.

Every one regards his own age as morally worse, and intellectually better than it really is; for in science the new is an advance; but in morals the new, as a contradiction to our inner ideals and our historic idols, is ever a retrogression.

The child must be armed against the future; yes, even against the close pressing present, with a counterbalancing weight of three powers against the three weaknesses of the will, of love, and of religion.

When the stoic energy of will is formed, there is then *a loving spirit* made free. Fear is more egoistic than courage because it is more needy; the exhausting parasitical plants of selfishness only attach themselves to decayed trunks.

If man, created more for love than for opposition, can only attain a free clear space, he possesses love; and that is love of the strongest kind, which builds on rocks, not on waves. Let the bodily heart be the pattern of the spiritual; easily injured, sensitive, lively, and warm, but yet a tough, free-beating muscle behind the lattice work of bones, and its tender nerves are difficult to find.

The third point, according to which the child is to be educated against the age, must aim at placing before the soul first, not the means, but the right to educate religiously. Power and love are two opposing forces of the inner man; but religion is the equal union of both, the man within the man.

QUESTIONS ON "THE MORALE OF THE SCHOOL."
(Continued from page 262.)

4. What is meant by interesting the children in the school? (Psychological and pedagogical definitions of interest.) What are essential conditions for developing the social co-operation of pupils at school? How can the school train children to honest and persistent work? (Treat also negatively.)

5. What educational demands can justly be made upon a course of study for schools, elementary and secondary?

6. Mr. Gilbert writes, "If all the members of a community felt a personal responsibility for the well-being of the community we should at once have an ideal condition of things." Explain and apply to school management.

7. Matthew Arnold asserts that conduct is three-fourths of life. Explain. Deduct rules for the training of children.

8. Discuss pedagogic cautions with reference to prizes and marks in school.

Teachers' Examinations.

New York State Uniform Examinations for Commissioners' Certificate.

(November 13 and 14, 1902.)

AMERICAN HISTORY.

1. What had the Spaniards accomplished by way of exploration and settlement within the present limits of the United States at the close of the sixteenth century?

2. Of what religious sect were the first settlers of *a.* Virginia, *b.* Maryland, *c.* Massachusetts, *d.* Pennsylvania?

3. *a.* What measures did the colonists take to resist the operations of the Stamp Act? *b.* What did the English government immediately do on repealing the act to maintain its right to tax the colonists.

4. *a.* Why did the British evacuate Philadelphia? *b.* What battle did Washington force the British to fight on their march from Philadelphia to New York?

5. *a.* What insurrection or rebellion occurred during the administration of Washington? *b.* State its cause.

6. Give a brief account of the foreign complications and enactments which greatly injured the foreign commerce of the country during the administration of Jefferson.

7. *a.* Under whose leadership did Texas acquire its independence of Mexico? *b.* How did Texas become a part of the United States?

8. *a.* What was the "Wilmot Proviso"? *b.* Give three provisions of the "Omnibus Bill."

9. Give the results of "Stonewall" Jackson's campaign in the Shenandoah valley.

10. The "Civil Rights Bill" and the "Freedman's Bureau Bill" were important acts passed by Congress shortly after the close of the civil war. State the general provisions of one of these.

ANSWERS.

1. The possessions in the West Indies, Florida, a large portion of the Southern states and of the Pacific coast.

NOTE.—The Spaniards applied the name Florida to all North *America* as far as Canada and Newfoundland. St. Augustine *was settled in* 1565. Santa Fe in 1582.

2. (2) Church of England; (b) Catholics; (c) Pilgrims; (d) Quakers.

3. (a) The organization known as the "Sons of Liberty" was formed. Stirring addresses were made by such men as James Otis, Samuel Adams, John Adams, and Patrick Henry. The "Stamp Act Congress" was convened in New York and a petition was forwarded to the king, the House of Commons, and the House of Lords. (b) Parliament imposed a new tax on tea, glass, paper, lead, and painter's colors.

4. (a) The British realized that New York was the vital point; besides, the "French Alliance" made it necessary. (b) Monmouth.

5. (a) The whiskey insurrection. (b) The people of Western Pennsylvania openly resisted the collection of a tax on distilled liquors. They thought it unjust because at that time they could transport the liquor across the state more easily than the grain.

6. War between England and France was the principal cause. In 1806 England ordered a blockade of all the ports of those nations that had taken side with France. Napoleon replied by issuing the "Berlin decree" prohibiting all commerce with the British Isles, and declaring them to be in a state of blockade. The next year the British "Orders in Council" were issued, forbidding American vessels to enter any port of Europe except those of Great Britain and Sweden. The "Milan decree" then followed, in which Napoleon ordered the capture of any American vessel that had previously entered an English port.

7. (a) Sam Houston. (b) It applied for admission in April, 1844, was first rejected, but finally admitted March 3, 1745.

8. (a) In August, 1846, David Wilmot, of Pennsylvania, offered a bill in Congress forbidding slavery in any territory which should be acquired. The bill failed to pass. (b) That California should be admitted as a free state; that the territories of Utah and New Mexico should be formed without any provisions concerning slavery; that Texas should be paid ten million dollars to give up its claim on the territory of New Mexico; that the slave trade should be prohibited in the District of Columbia; that a fugitive slave law should be enacted.

9. Jackson succeeded in threatening Washington, held at bay three major-generals with an army four times as large as his own, *prevented* McDowell from joining McClellan,

and by his sagacious and rapid movements saved Richmond.

10. The Civil Rights bill gave the Freedmen the rights of citizens of the United States, except that the right to vote was left to be given by the state. The Freedman's bureau bill provided for a bureau to take charge of the interests of the freed slaves, and authorized allotments to the freedmen of confiscated or abandoned lands given over by the president for such purposes.

SCHOOL LAW.

1. *a.* For what purposes, and *b.* in what way may a trustee of a common school district authorize the payment of school moneys received from the state?

2. To what extent must physiology and hygiene with special reference to the effects of alcoholic drinks and narcotics be taught to the pupils of the grades between the third primary and the second year of the high school?

3. *a.* What is the time limit of each of the three grades of certificates granted under the uniform examinations? *b.* Under what conditions may second-grade standings obtained before August 1, 1900, be applied in securing a first-grade certificate?

4. A board of trustees may contain one member or three members. What is the length of term of office of *a.* a sole trustee; *b.* a member of a board of three trustees? *c.* What is the legal provision in regard to the relative powers of such boards?

5. *a.* For how long must a vacancy in the office of a trustee of a common school district have existed in order that it may be filled by appointment? *b.* What officer is authorized to make such appointment?

6. What are the provisions of the school law in regard to holidays?

7. Name two ways by which a tax may be authorized for repairing the school-house.

8. What have state superintendents held as to the responsibility of teachers for the conduct of school children when going to and from school?

9. When, by whom, and for how long are school commissioners chosen?

10. Between what dates does the law require attendance upon instruction of all pupils between the ages of 8 and 12, *physically* and mentally competent?

ANSWERS.

1. *a.* Teachers' wages, library purposes. *b.* By giving an order therefor on the supervisor, collector, or treasurer.

2. The pupils must study the subject at least three lessons a week for ten or more weeks every year with suitable text-books in their hands and pass satisfactory tests as in other subjects. Where there are nine or more grades below the high school the study may be omitted in all years above the eighth and below the high school, by such pupils as have passed the required tests of the eighth year. In these schools all pupils in the lowest three primary grades, not kindergarten, shall have at least two oral lessons a week for at least ten weeks by teachers having text-books suitable for such instruction in their hands. This applies to corresponding classes of ungraded schools.

3. *a.* 3d grade one year, 2d grade three years, 1st grade ten years. *b.* Candidates credited with ninety per cent. or more on a 2d or 3d grade certificate will be exempt from examination in such subjects for one year from the date of the expiration of the certificate on which such standing is credited. Teachers who have taught successfully five years shall be exempt from examination in subjects credited on a 2d grade certificate with a standing of seventy-five per cent. for two years after the expiration of the certificate on which they are credited; but this does not apply to standings in reading and English composition obtained before Aug. 1, 1900.

4. *a.* 1 year; *b.* 3 years. *c.* A board consisting of a sole trustee of a district shall have all the powers, and be subject to all the duties, liabilities, and penalties conferred and imposed by law upon or against a board of three trustees or any trustee or trustees, or a majority of the trustees of said board having three trustees of a district (Title 7, Art. 6. Sec. 44, Consolidated School Law).

5. *a.* 1 month. *b.* The school commissioner.

6, The holidays are January 1, February 12, February 22, May 30, July 4, the first Monday of September, December 25, each general election day, and each day appointed by the president of the United States or by the governor of this state as a day of general thanksgiving, general fasting and prayer, or other general religious observance. When one of these days falls upon Sunday the next day shall be observed as the *holiday.* *No* Saturday shall be counted as a school day and no school shall be in session on a legal holiday or Saturday.

7. *a.* By a vote of the district. *b.* By an order of the state superintendent thru the school commissioner saying what repairs shall be made and authorizing the trustee or trustees to issue a warrant for the collection of the tax necessary.

8. Their responsibility ceases when the child leaves the school ground.

9. At the general election of 1902 and every third year thereafter, by the electors of the district over which the commissioner is to have jurisdiction. For three years.

10. Every day, between the first day of October and of the following June, that the public school is in session.

METHODS AND SCHOOL ECONOMY.

1. In what part of the school course should those things be taught that appeal chiefly to *a.* the memory; *b.* the reasoning powers? Give illustrations and state reasons for your answers.

2. Name two things that determine the strength of the memory.

3. Pupils sometimes pass an examination in arithmetic when only twelve or thirteen years of age and never pursue the subject afterward. Is this wise? Give reasons for your answer.

4. Both the immediate and the ultimate results should be considered in our teaching. *a.* Which is the more easily determined? *b.* Which is the more important? Give reasons for your answers.

5. Give two reasons why insufficiently lighted rooms are objectionable.

6. Discuss this question: Should the records of the scholarship of pupils be kept in per cents.?

7. State what advantage is to be derived by tracing some parallel of latitude around the earth, noting the important cities, lakes, mountains, rivers, etc., on or near it.

8. Which is the more important to the class-room teacher, the science or the art of education? Give reasons for your answer.

9. What is chiefly to be gained thru *a.* silent reading; *b.* oral reading?

10. *a.* What is the chief difficulty encountered in teaching

pupils to write compositions? *b.* Give a plan for meeting this difficulty.

ANSWERS.

1. *a.* The early part. *b.* The later part. Impressions are easily made on the young child's mind, but he has not received that general knowledge necessary for reasoning which comes as he passes from stage to stage thru his school life. A boy might memorize the following quotation from Milton in the second grade, but he could not realize its full significance, as his stock of facts relating to its meaning is too meager at this age: "They also serve who only stand and wait."

2. Interest is necessary to attention and upon attention depends success in memorizing. Habit, the condition of mind or body which is manifested in the tendency to unconscious repetition of acts or states, is an important element of memory.

3. No. Arithmetic is a tool; to use it skilfully repetition is necessary. The reasoning faculties of a child twelve years old have been stimulated only, and practical skill is not yet acquired.

4. *a.* The immediate result is important, as it gives encouragement and measure of success. But *b.* the ultimate result bears upon the child's future, and must underlie all plans of school work.

5. It is harmful to the eye. It causes a nervous strain and injures the general health.

6. In the lower grades it is not desirable or practical, as a child can not be accurately marked and many days only a very limited number can recite in a period of fifteen minutes, taking the standard made by the "Committee of Fifteen." In the upper grades it may be wise, especially with the class-room teacher having several classes in the same subject. If a high school teacher has five classes in physical geography, forty pupils in a class, it may be the easiest way to determine the relative standing of the pupils. Marking in per cent. sometimes is beneficial in making pupils more careful.

7. It answers as a center around which many facts are grouped, thus aiding the memory in retaining them by the relations established and comparisons made.

8. No art can become more than artisanship save in the hands of one who knows the science on which the art is based.

9. *a.* Thought; *b.* Correct expression of thought.

10. *a.* To find a subject in which they are interested and about which they want to say something. *b.* Let the first compositions be an account of something in which the scholars have recently participated, and which they have enjoyed.

ENGLISH COMPOSITION.

1. Write for your village paper a notice of a school entertainment, giving the time, place, nature, and admission fee.

2. To what kind of a letter is each of the following terms best suited: *a.* Dear Madam, *b.* My dear Ellen, *c.* Yours truly, *d.* Yours affectionately, *e.* (Mrs.) Zilla Harris?

3. Write a despatch of not more than ten words to the principal of your school, telling him that you cannot return to school on account of the serious illness of your mother, and suggesting that he secure Miss Smith as a substitute until your return.

4. In each of the following blanks supply the correct case of some pronoun: *a.* does she look like? *b.* do you take me to be? *c.* did you say called to-day? *d.* Will you let Mary and go? *e.* He said Mary and could go. *f.* The man house was robbed gave the alarm. *g.* Mr. Brown ran down the street gave the alarm. *h.* You don't mind staying. *i.* The invitation was sent to those he thought would come. *j.* They say it was who ran away.

5. Show either by definition or by use in sentences the distinction in meaning in the words of the following groups: *a.* earn, *b.* gain, *c.* win; *d.* sit, *e.* set; *f.* lie, *g.* lay; *h.* choose, *i.* prefer, *j.* select.

6. Punctuate the following and give reasons:

> *a.* The food was bad the meal ill served the landlord Heaven bless him was dirty but what a talk we had about work play books art life.
>
> *b.* The telegram was sent from Chicago Ill April 24 1901

7. Write an acceptance of the following invitation:

Mrs. John Moore
At Home
Thursday evening, November first,
at nine o'clock.

8. Develop the following sentence into a paragraph by giving contrasts:

There is a difference between character and reputation.

9-10. Write a composition on one of the following topics: My schoolroom (description). Roosevelt: writer, soldier, and statesman. Home life in colonial New York.

ANSWERS.

1. The Tully Union school will hold an entertainment appropriate to the day on Thanksgiving evening, November 27, at Van Bergen's hall. The exercises will begin promptly at eight o'clock. Admission, 10 cents. Proceeds will be used for library purposes.

2. *a.* Business; *b.* friendship; *c.* business; *d.* friendship; *e.* business.

ROCHESTER, N. Y., September 13, 1902.

3. E. Z. Mark, principal union school, Titicus, N. Y.

Mother ill impossible to return now. Miss Smith would be glad to substitute. MAY I. WATT.

4. *a.* *Whom* does she look like? *b.* *Who* do you take me to be? *c.* *Who* did you say called to-day? *d.* Will you let Mary and *me* go? *e.* He said Mary and *I* could go. *f.* The man *whose* house was robbed gave the alarm. *g.* Mr. Brown *who* ran down the street gave the alarm. *h.* You don't mind *my* staying. *i.* The invitation was sent to those *who* he thought would come. *j.* They say it was *he* who ran away.

5. *a.* *Earn,* to receive as compensation, as, he earned twenty dollars last week; *b.* *gain,* to obtain as profit, as, after paying all expenses he found he had gained fifty dollars; *c.* *win,* to gain in contest, as, the University of Michigan wins the Western championship at football this year.

d. *Sit,* an intransitive verb meaning to rest upon the haunches, as, Senator Dollivar spoke last evening and several public men were invited to sit upon the platform; *e.* *set,* a transitive verb meaning to place, as, set the dish on the table.

f. *Lie,* an intransitive verb meaning to recline, as, lie down and rest; *g.* *lay,* a transitive verb meaning to place in position, as, lay the book on the table.

h. *Choose,* to fix upon by act of will, especially by deliberate judgment, as, choose the fruit you like best; *i.* *prefer,* to favor one thing as more agreeable to the taste and feelings than another, as, I prefer opera to oratorio; *j.* *select,* to take by preference from among others, as, select a suit of clothes to-day.

6. *a.* The food was bad, the meal ill served, the landlord—

Heaven bless him—was dirty ; but what a talk we had about work, play, books, art, life.

The first two commas are used because co-ordinate clauses if simple in construction should be separated by commas. The dash is used to mark a sudden change of thought and construction. The semi-colon is used because the members of this compound sentence contain commas ; the last four commas because they form a series of words. A period is placed at the end of the sentence, as in accordance with present taste to punctuate quietly ; a few years ago an exclamation point would have been used.

b. The telegram was sent from Chicago, Ill., April 24, 1901.

A comma is placed after the names of the city and the state, a period following the name of the state because it is abbreviated ; a comma is placed after the date, and a period at the end of the sentence.

7. My dear Mrs. Moore,

It gives me pleasure to accept your kind invitation for Thursday evening, November first, at nine o'clock.

Yours sincerely,
GERTRUDE WALKER,

8. There is a difference between character and reputation. Character is what you are ; reputation is what you are thought to be. Character depends upon yourself ; reputation upon the word of others : Character is abiding ; reputation is often as the wind that blows.

9-10. Answers will differ.

ARITHMETIC.

1. Define, and give example of *a*, multiple; *b*, common multiple.

2. The quotient is one-half the divisor. The remainder which is 17, is one-half the quotient. Find the dividend.

3. Divide $500 between A, B, and C, so that A gets twice as much as B and two-thirds as much as C.

4. Two men, 31⅛ miles apart, travel toward each other. When they meet it is found that one has traveled 7¾ miles more than the other. How far has each traveled?

5. It is 4:30 p.m. by a ship's chronometer set by Greenwich time when the sun is on the meridian. What is the longitude of the ship?

6. The discount on goods, at 30%, 10%, and 5% off, is $23.94. What is the list price?

7. What sum of money at 5% simple interest will produce in one year and three months the same interest that $2,940 will produce at 4% in two years and six months? (Solve by proportion.)

8. The square on the diagonal of a square room is 648 sq. ft. What will it cost to carpet the room with carpet ¾ yd, wide, at 90c. a yard?

9. What must be paid for stock paying an annual dividend of 3% to secure an annual income of 7% from the investment?

10. The proceeds of a note for $500 discounted at 6% is $492.50. Find the term of discount.

ANSWERS.

1. (a) A multiple is a number exactly divisible by a given number. 100 is a multiple of 5. (b) A common multiple is a number exactly divisible by two or more given numbers. 100 is a common multiple of 2, 4, 5, 10, 20, 25, 50.

2. 2329.

3. A, $166⅔; B, $83⅓; C, $250.

4. 11⅞ miles, 19⅝ miles.

5. 67° 30′ W.

6. $59.63.

7. $$\left.\begin{array}{c}5\%:4\%\\ 15\text{ mos.}:30\text{ mos.}\end{array}\right\}::\$2940:\$4704,\ \textit{Ans.}$$

8. $43.20.

9. $42.857 per $100.

10. 3 months.

PHYSIOLOGY AND HYGIENE.

1. Describe the action *a.* of the soft palate in the process of swallowing; *b.* of the epiglottis.

2. *a.* Draw a line representing the curves of the spinal column. *b.* Mention two purposes of the curves.

3. *a.* Give the location of the atlas. *b.* State its function.

4. Describe as to structure and function *a.* the gray matter of the brain; *b.* the white matter.

5. Describe the action of the muscles of the thorax and of the diaphragm in the process of breathing.

6. Name three habits of daily living which assist in maintaining a healthy condition of the digestive organs.

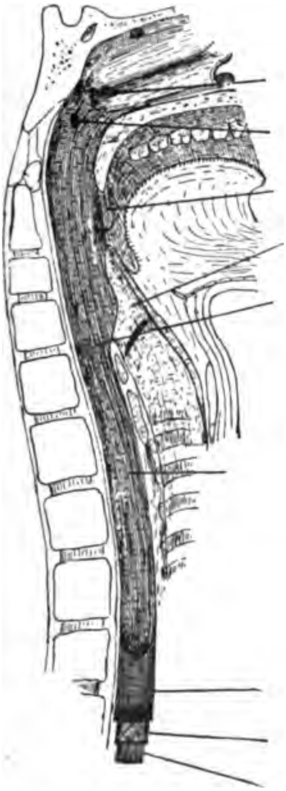
7. How is the sensation of smell produced?

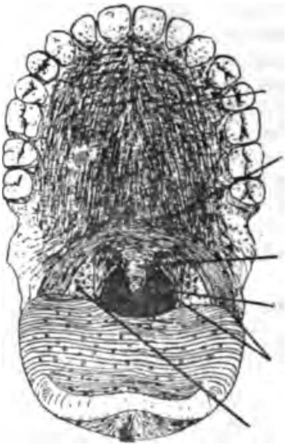
8. *a.* What is the active principle of tobacco called? *b.* What is its effect on the muscles?

9. Define *a.* hygiene; *b.* assimilation; *c.* excretion.

10. What food elements are mainly digested in the stomach?

ANSWERS.





1. *a.* As the bolus of food is carried from the mouth into the pharynx the soft palate is swung backward against the posterior wall of the pharynx and thus the food is prevented from passing toward the nasal passages. *b.* It is often stated that the epiglottis descends like a lid over the opening into the larynx during deglutition, but this has been shown not to be the case. Instead, closure of the larynx is brought about by the two arytenoid cartilages being drawn up against the epiglottis.

2. *a.*

b. Elasticity in the support of the head is aided by these curves, tho they also exist in fore-footed animals. The chief functions, however, are to offer a more advantageous attachment to muscles than could be effected were the spine straight and to aid in ventral flexion.

3. The atlas is that vertebra on which the skull directly rests. On the atlas the head may be removed backwards

and forwards while the atlas moves together with the skull when the head is rotated.

4. The gray matter of the brain is composed of nerve cells, fine nerve-fibers and supporting tissues; the white matter is composed chiefly of large medullated fibers. In the former the associating nervous activities take place, while the fibers of the white matter serve to conduct nerve impulses.

5. In inspiration the thoracic cavity is enlarged by the muscles of the thorax, which rotate the ribs upwards and outwards, and by the flattening of the diaphragm. In expiration the musculature plays little active part except when the breathing is forced. In forced expiration certain thoracic muscles serve to rotate the ribs downwards and inwards.

6. Regular exercise, regular eating, and regular defecation.

7. By the action of very small particles of the odoriferous substance on the olfactory mucous membrane and by processes set up within the nervous system in consequence of this.

8. Nicotine. It has the power to interfere with the activities of the smooth musculature of the alimentary canal and of the blood vessels and seriously to affect the activities of the heart. It may also partially paralyze the activities of the voluntary muscles.

9. *a.* Hygiene treats of the preservation of health. *b.* Assimilation is the process of food absorption. *c.* Excretion is the process of elimination of "waste products" from the body.

GRAMMAR.

1 I visited the hall of the Antiquarian Society and found
2 there, to my infinite gratification, such a collection of
3 ancient, modern, and oriental languages as I never before
4 conceived to be collected in one place; and, sir, you may
5 imagine with what sentiments of gratitude I was affected
6 when, upon evincing a desire to examine some of these
7 works, I was kindly invited to an unlimited participation
8 in all the benefits of this noble institution. Availing my-
9 self of the kindness of the directors, I spent about three
10 hours daily at the hall, which, with an hour at noon, and
11 three in the evening, made up the portion of the day
12 which I appropriated to my studies, the rest being occu-
13 pied in arduous manual labor. —*Elihu Burritt.*

In order to secure some degree of uniformity in answer papers, it is recommended that candidates observe the following suggestions:

1. Clauses are principal or subordinate. Subordinate clauses *a*. subject clauses; *b*. objective clauses; *c*. adjective clauses; *d*. adverbial clauses.
2. In naming a clause, include only its unmodified subject and unmodified predicate.
3. In giving modifiers, if words, name the parts of speech to which they belong. In like manner state the character of modifying phrases and clauses, as adjective, adverbial, etc.
4. An object of a transitive verb is classed as a modifier of that verb.
5. In parsing a noun or pronoun, observe the following order: Class, person, number, gender, case. Give the reason for case. In parsing a relative pronoun, state the agreement with its antecedent.
6. In giving the syntax of a noun or pronoun, give only the case and the reason for it.
7. Verbs are divided into two classes, viz., transitive and intransitive. A transitive verb may be used in the active or the passive voice.
8. In parsing a verb, observe the following order: Principal parts, regular or irregular, transitive or intransitive, voice, mode, tense, person, number, agreement; give the special use of an infinitive or participle after tense.

The first seven questions refer to the above selection.

1. Classify five subordinate clauses.

2. Give *a*. three modifiers of *found* (line 1); *b*. two, of *was invited* (line 7); *c*. three, of *spent* (line 9).

3. Give the syntax of *a*. *as* (line 3); *b*. *sir* (line 4); *c*. *which* (line 10).

4. Give the syntax of *a*. *before* (line 3); *b*. *about* (line 9); *c*. *up* (line 11).

5. Give the syntax of *a*. *evincing* (line 6); *b*. *being occupied* (lines 12 and 13).

6. Parse *a*. *what* (line 5); *b*. *three* (line 11).

7. Select two infinitives and give the syntax of each.

8. Conjugate the verb *teach* in the passive voice, indicative mode, present perfect tense.

9. When should the comparative degree of adjectives be used? When, the superlative? Give an example of each in a sentence.

10. Illustrate in sentences a conditional clause whose verb is *a*. in the indicative mode; *b*. in the subjunctive mode. Explain the use of each mode as used in these conditional clauses.

ANSWERS.

1. Adverbial, *I conceived, I was invited;* objective, *I was affected;* adjective, *which made. I appropriated.*

2. *a*. *There, to gratification, collection, b. kindly to participation, c. hours, daily, at hall.*

3. *a*. Conjunctive adverb, connects *conceived* with *such; b*. noun used independently—a nominative absolute by address; *c*. relative pronoun relating to *ours*, subject of adjective clause, *which made.*

4. *a*. Adverb, modifies *conceived; b*. adverb, modifies adjective *three; c*. adverb, modifies *made*.

5. *a.* Gerund, principal word in phrase *upon evincing; b.* participle, modifies *rest.*

6. *a.* Adjective pronoun, third person, plural number, neuter gender, modifying *sentiments; b.* numeral adjective, modifies *hours* (understood).

7. *To be collected,* adjective modifier of *collection; to examine,* adjective modifier of *desire.*

8. *Singular.*—I have been taught, you have been taught, he has been taught. *Plural.*—we have been taught, you have been taught, they have been taught.

9. To express a greater or less degree of the quality; to express the greatest or least degree of the quality. I spend the *greater* part of my time in school. He was the *greatest* historian of the century.

The question may refer to the rule to use the comparative when comparing two objects, the superlative when comparing more than two.

10. *a.* You need not worry even if it *is* true. *b.* You need not worry even if it *be* true. Conditions stated as facts, not as suppositions, are expressed by the indicative. The subjunctive here implies neither the truth nor the falsity.

GEOGRAPHY.

1. What determines the position of *a.* the poles; *b.* the equator; *c.* the polar circles?

2. Give three steps in the process of distribution of moisture, by natural agencies.

3. *a.* What is a river system? *b.* Name four large river systems of North America.

4. Give the location of a region in South America of *a.* dense forests; *b.* grassy plains; *c.* desert; *d.* rich pasture-lands.

5. Distinguish between the Kingdom of Great Britain and the British Empire.

6. *a.* Which are the five leading countries of Europe? *b.* Give the form of government of each of these countries. *c.* Give the name and location of the capital city of each. *d.* the chief seaport of each.

7. Name four leading products of British America.

8. *a.* What countries are called the Barbary States? *b.* Give the location of these countries in order from west to east.

9. *a.* Name three railway trunk lines which connect the cities of Buffalo and New York. *b.* Give the location of an important city on each line between these two places.

10. Explain the meaning of the terms—eastern, central, mountain, Pacific, as applied to standard time.

ANSWERS.

1. *a, b.* The position of the earth's axis; *c.* the inclination of the earth's axis.

2. Evaporization from the ocean; transportation by the winds; precipitation.

3. *a.* A river system is the main stream, with all its tributaries and branches. *b.* Mississippi, St. Lawrence, Yukon, Columbia, Colorado.

4. *a.* Along the Amazon river; *b.* along the Orinoco; *c.* Southern Argentine; *d.* along the Rio de la Plata.

5. The kingdom of Great Britain is made up of England, Wales, Scotland, Ireland, and isles adjoining, while the British Empire includes all its dependencies all over the world. 6. *a.* England, Germany, Russia, France, Austria-Hungary. *b.* France is a republic, Russia an absolute monarchy; the others are limited monarchies. *c.* London in the southeastern part on the Thames; Berlin northeast of the center, on the Spree; St. Petersburg in the northeastern part on the Gulf of Finland; Paris on the north-central part on the Seine; Vienna in the eastern part of Austria, on the Danube. *d.* Liverpool, just north of where Wales joins England on the Irish sea; Hamburg at the mouth of the Elbe on the North Sea; Odessa in the southern part of Russia on the Black sea; Havre at the mouth of the Seine on the English channel; Trieste, in the southwestern part on the Gulf of Trieste.

7. Wheat and flour, cheese, lumber, furs, fish.

8. *a.* *b.* Morocco, Algiers, Tunis, Tripoli.

9. *a.* New York Central and Hudson River, Lehigh Valley, Delaware, Lackawanna & Western Railroad. *b.* Albany, on the Hudson river a few miles south of the mouth of the Mohawk. Wilkesbarre in the northeastern part of Pennsylvania on the Susquehanna river. Binghamton in the southern part of New York state at the junction of the Chenango and Susquehanna rivers.

10. Eastern time is the true local time of the 75th meridian west of Greenwich, and is 5 hours slower than Greenwich time. It embraces all the territory extending 7.5° on each side of the 75th meridian. Central time is the time of the 90th meridian west of Greenwich; it is 6 hours slower than the Greenwich time and one hour slower than eastern time. It embraces 7.5° each side of the 90th meridian. Mountain time is the clock time of the meridian of 105° west of Greenwich. It extends over 7.5° each side of this meridian and is seven hours slower than Greenwich time. Pacific time is the true local or clock time of the meridian 120° west from Greenwich and extends over 7.5° each side of this meridian. It is eight hours slower than Greenwich time.

While these statements are theoretically true, practically the large cities use one or more standards of time. Thus Detroit, 83° west, recognizes not only local time but central and eastern time, so that 11 o'clock by one clock may be 10 *o'clock or* about 10:30 by another.

History of Our Times.

In nearly all the states a knowledge of current affairs is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subjects at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

(See *Our Times* of December 1, and December 15.)

Why was a great fleet under Admiral Dewey assembled in the Caribbean sea?

What is the present status of the Isthmian canal negotiations?

Describe the new transcontinental railway to be built in Canada.

What points will the new cable starting from San Francisco connect?

Why are more officers wanted for the navy?

What are the principal questions discussed in the president's message?

Mention some things that were done by the late Pan-American sanitary conference.

How much stronger is our navy than at the beginning of the war with Spain?

What change in parliamentary practice was brought about by ex-Speaker Thomas B. Reed?

Why is Chinese labor needed in the Philippines?

What port on the coast of Africa is France fortifying?

Why is there so much rivalry over Koweyt on the Persian gulf?

For what was Frederick Alfred Krupp noted?

Describe Cuba's trunk line railroad.

What changes have already been effected by the trans-Siberian railroad?

What noted London preacher lately passed away?

Why did the United States win the case against Russia in the arbitration court?

What race conflict is going on in Belgium?

Give the result of the Chile-Argentine arbitration.

Why is there a crisis in the silver market?

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A Brief Survey of the Pedagogy of Attention.

By PRIN. W. D. LEWIS, Prescott School, Syracuse, N.Y.

EVERY teacher realizes the importance of attention on the part of his pupils, and probably everyone who has given thought to the processes of his own mental life has recognized in the intensity of his attention the measure of his mental power at any given moment. Says Prof. James: " Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seemed several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatter-brained state which, in French, is called *distraction* and *Zerstreutheit* in German."

Kinds of Attention.

Nearly all psychologists agree in their classification of attention, altho using quite a variety of terms.

Passive Attention.—Attention which is marked by no conscious effort or direction of the will is called passive, reflex, or involuntary. Thus a loud noise, a brilliant light, a violent blow, a pungent odor, or any strong appeal to the senses will arouse the passive attention. The stimulus may continue and thus the passive attention may be held more or less intermittently for a considerable time. This form of attention may be aroused by an internal stimulus or by association, as, when a whiff of a certain perfume recalls a friend of long ago, or, when a strain of a half-forgotten song transports one back to childhood's days. It is spontaneous and the direction it takes is a sure indication of the fundamental tendencies of the individual. Its basis is emotion and it is the only form of attention in young children and in those leading a life largely emotional.

Active or Voluntary Attention.—Growing out of spontaneous or passive attention as a result of mental training, active or voluntary attention directs the mind to a certain part of the field of consciousness, bringing that within the focus and excluding the rest of the field. For example, the top of a certain high building affords an excellent view of the city. I am at first struck with the scene as a whole, but my interest soon leads me to seek out my own home or that of a friend, and then the rest of the panorama is excluded or is noted only as this or that landmark will aid in finding the house on which my attention is fixed. My mind and my sight were turned to one house out of the thousands before me by a distinct effort of will.

Secondary Passive Attention.—In active attention the mind selects its object and holds it in the focus of consciousness. Nearly all work is begun as voluntary attention, altho the routine work of one's occupation soon becomes reflex. Even mental work, tho begun thru a conscious effort of the will, soon becomes spontaneous thru the absorption of the mind in the task. This constitutes the third form, usually known as secondary passive attention. Only in this stage can any effective work be accomplished. If a conscious effort of the will is required to bring back the ever wandering mind the forces are wasted thru the very process of concentration, leaving little energy for the task.

Every mental worker knows that the state in which he produces his best work is one of complete absorption when he is oblivious of everything except the work in hand. Then he is conscious of no effort, his interest in the work and his delight in new discovery, or in new expression of old truth, are, for the time being, ends in themselves. It should be the aim of every teacher to get his class into this state. A half hour, when the class is thus absorbed, will accomplish more than days of shouting, "Attention!"

Spontaneous Attention Developed by Interest.

Voluntary attention, then, is of short duration, and is attended by great expense of vital force. It is apt to be less intense than passive or secondary passive attention, and is potent in proportion to the training it has received. It is, however, essential to secondary passive attention, but is a stage which should be gotten over as soon as possible. Thru the exercise of voluntary attention one can take sides with this or that idea out of the many which are struggling for first place in consciousness. This selective process must be cultivated if the child is to develop self-directive power. The child's will, however, is weak, while external attractions are strong, and the teacher must aid him by re-inforcing his voluntary attention with interest in order to bring him to a state of secondary passive attention when valuable work can be done. In this way mental habit is formed, and correct mental habits mean the highest power of which the individual is capable.

Experience the Starting Point.

The practical, working attention of the school-room or of the student must spring from interest and must be spontaneous or secondary passive. It may have been voluntary at the beginning of the task, but, as interest becomes keener, the sense of effort disappears and distracting stimuli are excluded. In order for a lesson to be interesting to a class *it must come within the range of the pupils' experience.* In other words, there must be an apperception mass to which the lesson appeals.

Unknown Words of Unintelligible Meaning Fail to Interest.

The basis of interest is feeling, and a totally new experience, one which finds nothing in the past life of the individual to which it can be likened, can arouse no feeling unless it be one of being bored. Listening to a conversation in an unknown tongue is an illustration of this. It is a pitiful fact that much of our teaching, particularly in history and geography, is open to criticism here. Occasionally a question from some pupil, who rebels at the stultifying process of learning words which are to him meaningless, reveals this fact to the teacher. But, for the most part, the children consent to drag wearily over a series of definitions of unknown words explained in terms equally unintelligible, and the school system is satisfied if the overworked memory reproduces, on examination, seventy-five per cent. of the matter, most of which is as meaningless to the child as "*eerie, eyrie, ickery, ann.*" This is an education of words unrelated to the real world which they are supposed to represent. The hatred of school displayed by many pupils is simply the natural, healthful revulsion against this process. Continued working attention without interest of some kind is impossible.

Forced Attitudes of Attention Only Deceive.

A severe teacher often succeeds in forcing her pupils to sit in an attitude of attention during a long recitation in which they have no interest, but she does not, therefore, secure attention. The pupils soon train themselves to "sit in position" and look at the teacher while allowing their minds to wander whither their fancies may lead. This kind of work is the more deceiving as the teacher of this type is usually no broader than the textbook, teaches solely for examinations, and is given credit for the good showing made by her pupils in a few well-drilled facts and principles. Rarely can an examination go farther than a mere word knowledge, and the material so glibly reproduced may be meaningless to the child writing the paper. A vital interest in the subject, born of the natural curiosity of the child, nourished by association with former acquirements, and kept growing by a continual consciousness of mastery, is the necessary condition of successful school work.

The Key to Memory.

As interest is a necessary condition of attention so apperception is a necessary condition of interest. Without these conditions, attention will lack the emotional warmth necessary to sustained effort. The three must go hand in hand. They furnish the key to memory, for where the interest and attention are intense, and the material related to past experience, retention is at its best.

Why Varied Illustrations Are Needed.

In the lack of uniformity of experience or apperceptive material lies the greatest difficulty of class work. A presentation of a subject which is interesting to one pupil is meaningless to another because it is related to nothing in his experience. It is right here that the live teacher differs from the text-book teacher. The former by a wealth of illustration, varied so as to reach the different elements of her class makes the meaning clear to all. By her personality and inspiration she arouses the laggard, makes the subject attractive, brings it within the experience of the various members of her class, and shows its relation to the life of the child. Thus the emotional warmth is aroused, and the child, feeling the delight of mystery, grows.

Use of Current Subjects of Interest.

The skilful teacher will take advantage of opportune times for teaching certain subjects. For example, the manner of electing a president of the United States, the correlation of the three departments of the National government, the inter-relation of the state and nation, and numberless important facts of civics will find a ready made interest at election time. Almost every subject of current interest can be utilized to increase the interest in some part of the school work. The education of the streets is doubtless mainly demoralizing, but it is a fact which tirades will not change. Let the teacher, therefore, take the spontaneous interests of street education and experience and use them as centers for work in every possible line of school activity.

Relation of Interest and Stages of Growth.

Not less important than the interests clustering around the child's daily experience are those which become predominant because of the particular stage of growth at which the individual has arrived. Keeping in mind the intimate relation between interest and attention, the teacher should use the results of child study, and adapt his material and his manner of presentation to the stage of growth of his class. The early adolescent is intensely interested in Shakespeare because of the dramatic action. For the same reason he is interested in the biographical and external side of history, while it is difficult to hold his attention to the more philosophical problems of the same subject which will appeal to him a few years later. Up to the age of twelve or fourteen the child will reason inaccurately and with great difficulty. He can, nevertheless, put to shame the ripe scholar in his retentiveness and in his fertility of imagination provided the latter power has not been stultified by the Gradgrind methods of the schools. To recognize the importance of the stages of growth would revolutionize our curricula and methods, and justify the recent movement in child study to its most malignant critics.

Cultivate the Habit of Conquering.

Not everything can come from spontaneous interest.

It is necessary to develop stick-to-it-iveness, to avoid the extreme of what Professor James calls "soft pedagogics." So while the teacher should hold the pupil's interest by bringing the subject within his experience and by appealing to his apperceptive masses, he should aim to develop an interest which will be strong simply because the difficult subject before him is a challenge to his mental power. The desideratum is to produce a habit of conquering, of finding an interest in the subject in hand which will carry the student over into secondary, passive attention. It is this habit of conquering which renders all tasks comparatively easy to the trained mind. It may safely be said that difference in attentive power largely marks the difference between men in all walks of life.

It is the problem of the school to teach the pupil how to study. He must be trained to bring all the powers of his mind to the task before him, to bring to its consideration everything in his experience which will be useful in its solution. Sustained attention will therefore usually be easier to the mind filled with many experiences, rich and original, for it sees in each object of attention new relations to its former acquisitions.

Physical Factors Should Be Looked After.

The teacher should remember that attention depends very largely upon physical conditions. Ventilation, recreation periods, temperature, change of work, all are important factors in producing attention. Changes of position and many of the spontaneous movements of children are aids rather than hindrances to attention. The child should be protected so far as possible from distractions, and particularly should the teacher see to it that she herself is not a disturbing element. The idea of quiet, steady work, of growth thru conquering difficulties is one which should be constantly before both teacher and pupil.

Pedagogical Classics.

Rousseau's "Émile, or Concerning Education."

Extracts from Book First.

EVERYTHING is good as it comes from the hand of the Creator; everything degenerates in the hands of man. Man forces one soil to nourish the productions of another, one tree to bear the fruits of another; he mingles and confounds climates, elements, seasons; he mutilates his dog, his horse, his slave. He overturns everything; disfigures everything; he loves deformity, monsters; he desires that nothing shall remain as nature made it, not even man himself. To please him, man must be broken in like a horse; man must be made over to man's own fashion, like a tree in his garden.

Plants are improved by cultivation, and men by education. If man were born large and strong, his size and strength would be useless to him until he had been taught to use them. They would be prejudicial to him, by preventing others from thinking of assisting him; and left to himself he would die of wretchedness before he had known his own necessities. We pity the state of infancy; we do not perceive that the human race would have perished if man had not begun by being a child.

We are born weak, we need strength; we are born destitute of all things, we need assistance; we are born stupid, we need judgment. *All that we have not at our birth, and that we need when grown up, is given us by education.*

This education comes to us from nature itself, or from other men, or from environment. The internal development of our faculties and of our organs is the education nature gives us; the use we are taught to make of this development is the education we get from other men; *and what* we learn, by our own experience, about things that interest us, is the education of environment.

Each of us is therefore formed by three kinds of teachers. The pupil in whom their different lessons contradict one another is badly educated, and will never be in harmony with himself; he alone is well educated in whom they all accord and tend toward the same end.

Now of these three different educations, that of nature is not within our power; that of circumstances can be only partially controlled by us; that of men is the only one of which we are truly the masters, and that only in theory. For who can hope to direct entirely the speech and conduct of all who surround a child?

As soon, therefore, as education becomes an art, its success is almost impossible, since the conditions necessary to success are not in our control. All that the utmost care can do is to appproach our object as closely as possible; but, for attaining it, special good fortune must aid us.

What is this object? The very one indicated by nature itself. Since the agreement of the three educations is necessary to their perfection, it is toward the one for which we ourselves can do nothing that we must direct both the others. But perhaps this word "nature" has too vague a meaning; we must here try to define it.

To form this rare creature—the natural man—what have we to do? Much, no doubt, but chiefly to prevent anything from being done.

In the natural order of things, all men being equal, the vocation common to all is manhood; and whoever is well trained for that, cannot fulfil badly any vocation connected with it. Whether my pupil be destined for the army, the church, or the bar, matters little to me. Before he can think of adopting the vocation of his parents, nature calls upon him to be a man. *To live* is the trade I wish to teach him. On leaving my hands he will not, I admit, be a magistrate, a soldier, or a priest;

first of all he will be a man. All that a man ought to be he can be, if need be. Fortune will in vain change his place, for he will always occupy his own.

Our real study is that of human life. He among us who best knows how to bear the good and evil fortunes of this life is, in my opinion, the best educated; whence it follows that true education consists less in precept than in practice. We begin to instruct ourselves when we begin to live; our education commences with the commencement of our life; our first teacher is our nurse. For this reason the word "education" had among the ancients another meaning which we no longer attach to it; it signified nutriment.

We must then take a broader view of things, and consider in our pupil man in the abstract, man exposed to all the accidents of human life.

We think only of protecting the child: this is not enough. We ought to teach him to protect himself when he is a man; to bear the blows of fate; to brave both wealth and wretchedness; to live, if need be, among the snows of Iceland or upon the burning rock of Malta. In vain you take precautions against his dying,—he must die after all; and if his death be not indeed the result of those very precautions, they are none the less unwise. It is less important to keep him from dying than it is to *teach him how to live.* To live is not merely to breathe, it is to act. It is to make use of our organs, of our senses, of our faculties, of all the powers which make us sensible of our existence. He who has lived most is not he who has the most years, but he who has been most truly conscious of what life is. A man may have been buried at the age of hundred, who died in the hour of his birth. He would have gained something by going to his grave in youth, if up to that time he had only lived.

Watch nature carefully, and follow the paths she traces out for you. She gives children continual exercise; she strengthens their constitution by ordeals of every kind; she teaches them early what pain and trouble mean. The cutting of their teeth gives them fever, sharp fits of colic throw them into convulsions, long coughing chokes them, worms torment them, repletion corrupts their blood, different leavens fermenting there cause dangerous eruptions. Nearly the whole of infancy is sickness and danger; half the children born into the world die before their eighth year. These trials past, the child has gained strength, and as soon as he can use life, its principle becomes more assured.

This is the law of nature. Why do you oppose her? Do you not see that in thinking to correct her you destroy her work and counteract the effect of all her cares? In your opinion, to do without what she is doing within is to redouble the danger. On the contrary, it is really to avert, to mitigate that danger. Experience teaches that more children who are delicately reared die than others. Provided we do not exceed the measure of their strength, it is better to employ it than to hoard it. Give them practice, then, in the trials they will one day have to endure. Inure their bodies to the inclemencies of the seasons, of climates, of elements; to hunger, thirst, fatigue; plunge them into the water of the Styx. Before the habits of the body are acquired we can give it such as we please without risk. But when once it has reached its full vigor, any alteration is perilous to its well-being. A child will endure changes which a man could not bear. The fibers of the former, soft and pliable, take without effort the bent we give them; those of man, more hardened, do not without violence change those they have received. We may therefore make a child robust without exposing his life or his health; and even if there were some risk we still ought not to hesitate. Since there are risks inseparable from human life, can we do better than to throw them back upon that period of life, when they are least disadvantageous?

A child becomes more precious as he advances in age. To the value of his person is added that of the cares he has cost us; if we lose his life, his own consciousness of death is added to our sense of loss. Above all things, then, in watching over his preservation we must think of the future. We must arm him against the misfortunes of youth before he has reached them. For, if the value of life increases up to the age when life becomes useful, what folly it is to spare the child some troubles, and to heap them upon the age of reason!

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The only habit a child should be allowed to form is to contract no habits whatever.

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In this outset of life, while memory and imagination are still inactive, the child pays attention only to what actually affects his senses. The first materials of his knowledge are his sensations. If, therefore, these are presented to him in suitable order his memory can hereafter present them to his understanding in the same order. But as he attends to his sensations only, it will at first suffice to show him very clearly the connection between these sensations, and the objects which give rise to them. He is eager to touch everything, to handle everything. Do not thwart this restless desire; it suggests to him a very necessary apprenticeship. It is thus he learns to feel the heat and coldness, hardness and softness, heaviness and lightness of bodies; to judge of their size, their shape, and all their sensible qualities, by looking, by touching, by listening; above all, by comparing the results of sight with those of touch, estimating with the eye the sensation a thing produces upon the fingers.

By movement alone we learn the existence of things which are not ourselves; and it is by our own movements alone that we gain the idea of extension.

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Reason alone teaches us to know good and evil. Conscience, which makes us love the one and hate the other, is independent of reason, but cannot grow strong without its aid. Before reaching years of reason we do good and evil unconsciously. There is no moral character in our actions, altho there sometimes is in our feeling toward those actions of others which relate to us. A child likes to disturb everything he sees; he breaks, he shatters everything within his reach; he lays hold of a bird just as he would lay hold of a stone, and strangles it without knowing what he is doing.

While the Author of nature gives children this active principle, he takes care that it shall do little harm; for he leaves them little power to indulge it. But no sooner do they look upon those about them as instruments which it is their business to set in motion, than they make use of them in following their own inclinations and in making up for their own want of strength. In this way they become disagreeable, tyrannical, imperious, perverse, unruly; a development not arising from a natural spirit of domination, but creating such a spirit. For no very long experience is requisite in teaching how pleasant it is to act thru others, and to need only move one's tongue to set the world in motion.

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Far from having too much strength, children have not even enough for all that nature demands of them. We ought, then, to leave them the free use of all natural strength which they cannot misuse. First maxim.

We must aid them, supplying whatever they lack in intelligence, in strength, in all that belongs to physical necessity. Second maxim.

In helping them, we must confine ourselves to what is really of use to them, yielding nothing to their whims or unreasonable wishes. For their own caprice will not trouble them unless we ourselves create it; it is not a natural *thing.* *Third* maxim.

We must study carefully their language and their signs, so that, at an age when they cannot dissemble, we may judge which of their desires spring from nature itself, and which of them from opinion. Fourth maxim.

The meaning of these rules is, to allow children more personal freedom and less authority; to let them do more for themselves, and exact less from others. Thus accustomed betimes to desire only what they can obtain or do for themselves, they will feel less keenly the want of whatever is not within their own power.

Reflections crowd upon us when we set about discussing the formation of children's language, and their baby talk itself. In spite of us, they always learn to speak by the same process, and all our philosophical speculations about it are entirely useless.

They seem, at first, to have a grammar adapted to their own age, altho its rules of syntax are more general than ours. And if we were to pay close attention to them, we should be astonished at the exactness with which they follow certain analogies, very faulty if you will, but very regular, that are displeasing only because harsh, or because usage does not recognize them.

It is unbearable pedantry, and a most useless labor, to attempt correcting in children every little fault against usage; they never fail themselves to correct these faults in time. Always speak correctly in their presence; order it so that they are never so happy with any one as with you; and rest assured their language will insensibly be purified by your own, without your having ever reproved them.

The first developments of childhood occur almost all at once. The child learns to speak, to eat, to walk, nearly at the same time. This is, properly, the first epoch of his life. Before then he is nothing more than he was before he was born; he has not a sentiment, not an idea; he scarcely has sensations; he does not feel his own existence.

The Equipment of the Teacher.

By J. O. BEVAN.

Report of lecture before the London College of Preceptors, abridged and adapted from the *Educational Times* for EDUCATIONAL FOUNDATIONS.

The Physical Equipment.

PERFECT teaching is consistent only with perfect health. When one considers the demands made by preliminary study, the sedentary nature of the occupation, the confinement in an atmosphere invariably more or less vitiated, the strain upon the nervous system and upon the organs of sight, hearing, and speech, one cannot but allow that the teacher should be exceptionally gifted in respect of physical health, and, resulting from that, of mental equipoise. Under the old dispensation it was forbidden that any person deformed or physically unsound should enter the priesthood. If the Jewish lawgiver were our director-general of education, he would lay down the same rule with reference to the teacher. It is undesirable that young children—the most imitative of creatures—should have before their eyes, in a conspicuous position, any person afflicted with malformation, whose movements are constantly abnormal. How frequently has a squint or a stammer been acquired from nurse or teacher and perpetuated in those under her charge! Bearing in mind, too, the pathological discoveries of the present day concerning the active and morbific microbe, any individual suffering from tuberculosis should be precluded from coming into close contact with the young.

The Spiritual Equipment.

The teaching function is more like the ministerial, the apostolic, than any other, inasmuch as it presupposes a call—a call to a distinct mission. One hardly imagines an individual entering upon the work of teaching with a view to leading an easy life or amassing a fortune. It is known to be exacting in no ordinary degree, to demand the exercise of unlimited patience and skill; while, of itself, it leads to no reward such as falls to the lot of the successful merchant, soldier, or politician. Butlers, cooks, and ladies' maids would scorn to change places with teachers if salaries only were concerned. No, the budding teacher must look upon his work as a mission and be led to devote himself upon the altar of duty from the highest motive; *i. e.*, that he may be enabled to exercise the mother-feeling of humanity—the creative and formative principle—whereby one is enabled to take dead matter, to breathe into its nostrils the breath of life, so that the thing of dust may become a living soul.

The Moral Equipment.

The possession of certain fundamental qualities we assume—such as truthfulness, honesty, conscientious endeavor to act one's part aright; but, in a special degree, teachers need humility, sympathy, tenderness, patience, perseverance, self-control, and clearness of thought and expression. One lays stress, too, on the possession of chivalrous justice—a disinclination to take undue advantage of differences in age, position, and acquirement. A very naughty boy once said to the writer: "Every teacher is at heart a bully." Of course he was but a naughty boy; but one is led to feel that in the case of teachers there is often a tendency to be unduly severe—to visit upon our pupils our own whims, bad temper, or disappointment; to fail to make allowances for the immaturity of youth, the lack of complete understanding of the position, the passing ailment or fretfulness, the loss of memory thru a kind of stage fright, and so on; that there is also, too often, a disposition to show off one's superior sagacity, information, or wit; to chaff one's scholars, to make them ridiculous in the eyes of their fellows, whose good or bad opinion is as much to them as the good or bad opinion of our contemporaries is to ourselves. One might, then, be more mindful than custom leads one to be of the sensitivenesss of youth, especially at the blushing stage; of the fact that our scholars cannot meet us on equal terms of strength, raillery, irony, or invective. In the school-room, as elsewhere, more evils are wrought by want of thought than by want of heart. These considerations should make us tolerant equally of mistakes and weaknesses, and, indeed, if we run these mistakes to earth, we shall frequently find that they are really marvels of ingenuity.

Study of Child Nature.

It is stated that the elements of the body are completely changed in every cycle of seven years, but it is frequently forgotten that a similar law operates in regard to the elements of the mind. Yet, in both cases, are we scarcely conscious of the change. Thus there often yawns a great gulf even between the young teacher and the child he sets himself to instruct. In what degree formal training would lead to the bridging of this chasm it is difficult to say. It is said above "the young teacher," for frequently it is only when one advances in years that one becomes a child again. It may be that this is partly owing to our becoming parents ourselves, and being thus brought into personal and sympathetic relation to young children. Otherwise, it may be due to the growth of tolerance and larger forgiveness which come with lengthening years, and partly also to the greater difference in time between us and our scholars, so that we can the more easily afford to unbend.

It may well be contended that our primal requisite as teachers is to *know ourselves*—our strength, our knowledge, and our limitations in respect of both and in our expression of them. The second great requisite is an acquaintance with the child—its faculties of body and mind, and, indeed, with its whole nature. We should know the *leading facts* concerning the structure of the body—*i. e.*, the body as an animated machine, governed by the laws of mechanics, measure, and avoirdupois; the bony framework, the shape of the constituent parts, their composition, manner of growth, and interlocking movements; the muscles, their attachment, mode of action, variation in size, waste, replenishment; the nervous system, its response to impulses from within and from without, its automatic and its conscious exercise; the digestive system, assimilation, nutrition, the character and variation of the teeth; the senses, their limits of activity and preservation in perfect and painless use. Further, in relation to those under our charge, we should study the laws of growth; the mysteries of direct and reflex action, the telegraphy of the senses; the avenues of knowledge in respect of sight, hearing, tactile movements; the signs and symptoms of simple ailments and infectious disorders; the dangers to be looked for and overcome in regard to possible accident; the laws of brain growth, signs of brain disturbance, fatigue, torpor, excitement, hysteria, chorea. In thought, we should follow our charges even to their cots at night.

The general question of hygiene should occupy our attention, including as it does the all-important subjects relating to construction of school-house, site, materials, space, heating, lighting, ventilation, furniture, playground, sanitary matters, avoidance of dirt, damp, bad smells, provision of a plentiful supply of pure water, &c. The eye of the teacher should be everywhere, taking in appearance, demeanor, posture of scholars, evidence of damp clothing, wet boots, signs of physical or mental over-exertion, of scarcity of food or malnutrition. We should follow our charges even into the playground—the mimic world of sport and battle; provide, where necessary, stimulus for play; instruct as to the true limits of emulation; see that fair dealing is practiced by the *seniors* towards the juniors, thus setting bullying at a discount, and engaging gradually in everything the responsibility of the older scholars. This is only one illustration of the necessity under which the teacher lies to induce co-operation between himself and his scholars, so that the impulsive mind and heart of the young may be enlisted on the side of justice and mercy, as embodied in him who presides over the fortunes of the little world of school.

Some heads of schools regard parents as necessary evils, as fools, or as their natural enemies; but, after all, parents have a certain interest in their children and may fittingly be humored so far as to have explained the reasons for any course of conduct, and to have their wishes consulted so far as the general curriculum and the common good may allow. It must be confessed that many persons who have assumed the functions of parenthood are inordinately weak and foolish, and, worse still, that they are lamentably ignorant of the functions of education in the truest and highest sense. In these cases it may be necessary that a headmaster—assuming, indeed (what is not axiomatic), that he is a true educationist—should take a strong line in some given instance, and express himself with vigor. Even so, if he be wise, he will allow it to be seen that his desire is not so much to gain his own way as to advance the highest welfare of the child committed to his keeping.

The Mental Equipment.

The foundation of learning, on the part of an intending teacher, should be ample in length and breadth. Depth will come in due time; for that can be realized only after long seasons of reflection and experience. The teacher should know something of everything and everything of his particular something—viz., the science and art of teaching.

The classes of technical subjects necessary for the student are: (a) history of education, the lives of educators; (b) physical and mental science; (c) school management; (d) practical teaching; (e) definitions of terms and things, logic.

History of Education and the Lives of Educators.

Some of the greatest men who have figured on the world's stage have been teachers; therefore we may congratulate ourselves that we come of a noble ancestry. The student will learn to devote himself, with an impartial mind, to the writings of professed educationists; but frequently these are pragmatical and dogmatical; so that, as a corrective, he may visit in thought, countries, and times far distant from his own. What an attractive picture is presented in certain Sanscrit works of Indian teachers of the olden time—men of simple life and manners, who, for sheer love of wisdom and of their fellows, taught all who came, gentle and simple, without fee or reward, living in a hut with an earthen floor, and subsisting on the free-will offerings of rice furnished by the faithful! Then, again, how pleasant to join the groups in the Academy and the Grove, and listen to the sententious wisdom of the Alexandrian, the Epicurean, and the Stoic. Turning over many pages of the world's history, we may say that it is useful, with all necessary caution, to win thru the ecstatic periods even of a Rousseau. Again, it is good to meet with men like unto Carlyle and Ruskin of the generation just past, not schoolmasters in the ordinary sense, yet having a message to deliver, often paradoxical and exaggerated, yet all the more likely, perhaps, to strike the ear and impress the imagination.

Physical and Mental Science.

In the present day a certain sub-stratum of physical science is indispensable to every man, much more to an *instructor* of youth. To the teacher, likewise, a knowledge of mental science is *sine qua non*. This science is not complete, even on its physical side, and most text-books are unsatisfactory, because a student of psychology expects so much—so much, indeed, that no author can tell him. In the study of this department of learning one caution is necessary. For purposes of description and comparison authors are compelled to divide and subdivide the matters of which they treat, and to regard the human subject as if the various faculties relating to the intellect, the emotions, and the will were perfectly differentiated and separated, as it were into water-tight compartments; but, when expression is given by an individual to any thought, feeling, or manifestation, the organism acts together. Intellect, emotion, and will all run into one mold, and life, so potent and elusive, with true vital energy, transforms and fuses all nature's elements to furnish a result which one part could not produce alone. Even so the electric spark acts upon a mixture of gases to produce a resultant—water—different in all its reactions from each of its constituent parts.

School Management and Practical Teaching.

Concerning school management and practical teaching, little need here be said. There are extant admirable text-books; but guidance under a master, both experienced and sympathetic, is absolutely necessary to beginners in the craft. In this connection it is lamentable to think how little help and encouragement is vouchsafed by those in authority to the assistant teachers in their schools.

Logic.

There is little doubt that the study of formal logic should be undertaken by the student as a distinct preparation for "getting up" lessons, and for the presentation of fact and argument to a class.

If this course of study be undertaken, it may be possible to lead up to a science of education, a science that many, even now, and with some reason, count as non-existent. What has been said resolves itself into a plea that a teacher should know his subject, should know himself, should know the child; the last-named element, in the past, being almost wholly neglected. Especially in respect of knowledge of the child, when the laws of brain growth, order of development, capacity for assimilation have been carefully laid down, it will be found possible to determine the kind and order of studies, so as in due sequence and degree to provide for the stimulation of the memory, the training of the powers of observation, the exercising of mechanical aptitude in relation to such subjects as arithmetic and rhythmic exercises, generally and finally, the habit of reflection and reasoning which involve the comparative and logical faculty and abstract elements of the mind.

A Plea for Originality.

Teachers are the most conservative of beings. There avails for proof a review of the curriculum and traditions of our public schools for a couple of hundred years, even up to the present time. It is astonishing that such teaching as was given should have eventuated in the results undoubtedly furnished. It serves to show that the school, in the largest sense of the word, means more than the class-room; and, moreover, that the human mind, as the human body, possesses a wonderful faculty for accommodating itself to successive doses of slow poison and of eliminating the virus from the system.

Said a head master to a pupil: "Why, your younger brother could have done this exercise better than you have done it!" "But, sir," rejoined the pupil, "he has not been here so long!" The moral of this story lies in the application thereof.

The present age with its new life, its new creative and motive power, its new requirements furnishes a suitable opportunity for teachers to pause in their work, and investigate the principles which should underlie that work; the subjects which are essential alike to the discipline of the character, to the enlargement of the mind, or the cultivation of the memory, and to measure the relative importance to be attached to nature study, the dead and living languages, humanities, and science, literature, music, and the arts. Again, they should aim at distinguishing between the different methods of teaching languages (whether living or dead), of teaching science, Euclid, and elementary mathematics; at settling how far our work should be directly instructional and informative, how far educational, how far utilitarian. Indeed, such investigations should be *periodically* undertaken; for, even when at a certain age or epoch innovations or improvements are introduced, it comes to pass (by lapse of time and the natural perversity of man) that the best elements of the change are lost, and only the worst and least effective stereotyped: so that (even as an hypothesis such as the Darwinian requires to be re-stated from time to time, as new facts are introduced and new interpretations of old facts admitted.) Froebelian or Herbartian methods likewise need to be overhauled as time goes on, and all other educational theories to be reconsidered in the dry light of the twentieth century. All the above-mentioned problems should be present to the mind of the young teacher. Stress is laid upon the adjective here, for of the grayheaded teacher it may well be said that the leopard cannot change his spots nor the Ethiopian his skin.

It is important that every dominant principle of education should be established on a foundation based on the strongest and most permanent elements in our own nature, and on our living powers of activity and expression. Therefore, over and above our ordinary routine work, room should always be found for a certain amount of experimentation. The ultimate influence of much that goes by the name of education tends to the repression of originality; indeed, this has worked itself out so as to constitute the most depressing feature of our daily life in respect of art, architecture, social life, and conversation. Therefore, we plead the more earnestly for the discovery and fostering of originality in the school-room during the period of quickest and most spontaneous growth. The traditional treatment of subjects in public schools tends to discourage, even to paralyze, any efforts of the earnest teacher in this direction. To balance obvious disadvantages in their lot, private teachers have the great advantage that they are untrammeled and unfettered; so that, if they are disposed to avail themselves of this freedom, they can try new schemes and new methods. We may naturally call upon them, therefore, to use their liberty for the good of their scholars and of the community at large, for it cannot fail to conduce to the general advancement that old truths should be presented from time to time in a new way, or new truths in a way which is well tried and old.

The Training of Teachers.

That teachers should be trained is axiomatic, but many questions arise when the subject is presented with any degree of completeness. What is meant by training? On what preliminary qualifications, moral and intellectual, must that training be superposed? How far does one's ordinary experience and recollection of school and college life tend to furnish a part or a whole of such training? If there must be formal training, how far should it be severely technical? At what age should it begin? How long should it continue? Could it be carried on concurrently with ordinary education? What literary, humanistic, psychological qualifications are presupposed? At *what institution* is this specific training available? Can one combine teaching with preparation for teaching? What is the probable cost? How can such cost be met in the case of poor students? How far may aid be looked for from state or local taxation? What advantages may training be expected to secure in after life in respect of one's status, remuneration, efficiency, and success? It must be allowed that with every advantage at disposal it is sometimes impossible to develop the true teacher out of the raw material available. Sometimes there are obstacles in respect of physical defects or of mental sluggishness, inducing difficulties in learning or in reproducing what has been learned. Further, it is rarely that one individual is good at everything. At one time there is lack of clearness and accuracy in arithmetic or the higher mathematics; at another, a want of facility in mastering the intricacies of grammar or the involutions of a foreign tongue. Even so, defects in one class of subjects may co-exist with extraordinary ability in others.

At the time that a decision is to be taken with reference to the choice of a profession there should be much searching of heart on the part of the person most concerned. In respect of teaching, above all other occupations, the question of motive is all-important. If the teacher be moved by sympathy for the tender, wayward, fractious, coy, winning, troublesome, disappointing child; if he be content to lay the foundations—broad and deep—of an edifice of which he will never see the coping-stone; to begin a work, the end of which is beyond the limits of the finite; to teach the stammering tongue to lisp the rudiments of which the full expression will be heard but in the far distant future: if, in this and other ways, he be content to cast his bread upon the waters; to sow the seed, and never to behold the harvest; to labor, but to labor apparently in vain; if he be forward to be and to do all this, and more, for a reward oftentimes in inverse proportion to his merits; then let him go on with patience, energy, and hope as his faithful attendants; otherwise, let him pause on the threshold and incontinently turn back, to put his hand to some vocation wherein there is less responsibility and a larger earthly fruition and reward.

Different persons, moved by the like good intentions, will yet assimilate training in different ways. In this, as in other walks, a little learning is a dangerous thing, *i. e.*, if it be regarded by the individual as perfect and complete; for then it puffs up with the idea that the first step is equal to the last; it brings about invidious comparisons, whereby one becomes disinclined to learn from others and to garner for oneself the harvest of daily experience in the school-room and the larger world outside; it leads to self-consciousness, so that one teaches but to please oneself or to gratify one's own vanity rather than to ground in progressive knowledge the young and immature minds submitted to one's dominion.

There is no doubt that training, as at present carried on, frequently begets vanity and narrowness of vision. This is evidenced alike in elementary and secondary teachers. Even at the best, training must lead to interference with one's own originality—to the inception of a large amount of theory; for it brings us into close contact with the opinions of men living at other times and under other conditions, thus rendering our assimilation of such theories difficult and sometimes even pernicious. In this relation the *dictum* may still be hazarded that "an ounce of practice is worth a pound of theory." It cannot be denied that, in the field of secondary labor a large proportion of head masters look upon the artificially trained teacher with a certain amount of suspicion—a few even with disgust. This may be due to the fact that the trained teacher is prone to give himself airs, and, in *no uncertain* way to insinuate that what he does not know about the science and practice of teaching is not worth knowing. Teachers of this stamp know just enough to induce them to imagine they know everything. With the addition of a little more knowledge they would come to the right conclusion, a conclusion reached by all truly wise—viz., that they really know nothing as they ought to know. In spite of all these experiences we assert emphatically that a special apprenticeship should be served by intending teachers, that it would render the *tyro* incalculable service to undergo a two-years' course in a training institution, under masters in the art, in generous emulation with students whose aims and aspirations were as lofty as his own, where a well-stocked and well-selected pedagogical library would place him *au courant* with past masters of the science, and where demonstration schools were available for persistent exhibition of the art of his profession. Every one must make mistakes in entering upon the practice of a profession. Under the circumstances described, mistakes would not be of such a serious character as in the case of the untrained, as they would stand a good chance of being rectified in their very inception before serious class teaching commenced.

QUESTIONS.

1. What do you consider an adequate personal equipment for the teacher of an elementary (or secondary) school? [Physical, spiritual, moral, scholastic, cultural, professional.] Why?

2. Outline a course of professional preparation for a teacher.

3. How may a teacher's powers of originality be preserved and even strengthened by a proper course of professional training?

4. Of what value to the teacher is the study of the history of education and the lives of great teachers? [Enumerate ten distinctively valuable results.\

Child Study.

A Continued Study of Children's Attitudes

By LILLIAN M. TOWNE, Boston Normal School.

(Continued.)

Among causes of asymmetry, the position in writing is considered important. Dr. E. R. Shaw has shown that, even with vertical script, the pupil may not have sat upright while writing. Yet he states that its adoption would lessen the frequency of fatigue scoliosis, especially if the teacher exercised care to keep the pupils rested and in good position. The influence of the teacher is of the utmost importance, for if vertical writing is to meet the claims made for it, its essentials must be required in all forms of written work. The reports show some faulty, but many excellent positions in the writing lesson, but in copying or written work the faulty positions are very prominent. As an illustration I present these charts from the same class. In regard to time and atmospheric conditions, the copying certainly had everything except the oversight of the teacher in its favor.

	Writing. Cloudy, 2.40 P. M.	Copying. Pleasant, 10 A. M.
Girl.	Good.	Twisted. On edge of chair.
"	Good.	Twisted. Feet in aisle.
"	Twisted. On left elbow.	On R. elbow. Sitting sidewise.
"	Forward. Shoulders rounded.	Forward. Shoulders rounded.
Boy.	Good.	Sliding down.
"	Twisted. On left elbow.	Twisted. Legs crossed.
"	Good.	Leaning on left elbow.
"	*Good.*	Twisted. On left elbow

The effect of the oversight of the teacher is apparent in the following chart, in which the teacher is cited as being very careful about position during the literature lesson.

Grade IX.

	Literature, 10 A. M.	Arithmetic, 11.30 A.M
Boy.	Good.	Shoulders forward.
"	Good.	Good.
"	Good.	Shoulders forward.
"	Feet in aisle.	On left elbow.
Girl.	Good.	Pelvis front. Shoulders twisted.
"	Good.	Shoulders twisted.
"	Good.	Good.
"	Good.	On left elbow.

	Literature, 10 A. M.	Arithmetic, 11.30 A.M.
Boy.	Good.	Shoulders forward.
"	Shoulders forward.	On right elbow.
"	Good.	Shoulders forward.
"	Good.	Sliding down.
Girl.	Good.	On left elbow.
"	Good.	Good.
"	Good.	Shoulders forward.
"	Good.	Good.

One of the section members, in answer to a preceding question, suggests that girls rest themselves, up to a certain age, by sitting on the foot, when the unladylikeness of this and similar positions is so forced upon them that, in order to be comfortable, they take a twisted position. The boy rests himself by sliding down in his seat and so, while he produces a flat chest, a twisted spine may not result. It is true that more girls than boys are affected with spinal curvature, the proportion being four or five to one. Fatigue caused by sitting posture may be a beginning of the difficulty, for the reports show faulty attitudes to be accentuated between the ages eight to thirteen. From Dr. Christopher's work in Chicago, it is known that the boy's endurance is always greater than the girl's; and that from the age of ten, this power increases more rapidly for the boy than for the girl.

Dr. Muller in his book urges that, "In order to amend the harmful influences of the school-room, the mobility of the joints, especially of the spinal column, should be increased; and that the muscles, especially of the back, be strengthened." Mobility and strength come from freedom and action. Boys get this in their outdoor sports. Girls do not, except in tennis and in sports of a like nature; and to the majority of girls even these sports are denied. Hence it is not strange that more cases of asymmetry are found persisting among girls than among boys.

The points this work has impressed are:

1. The need for properly constructed and equipped school-rooms.
2. The importance of having educators realize the value of frequent change in work, whereby over-fatigue at least may be lessened.
3. The need for more time for physical training in the school session, and the necessity for providing vigorous outdoor sports, especially for girls, thruout the entire year.
4. The potency of the teacher who believes that the hygiene of childhood and adolescence is fully as important as mental development.
5. The necessity for co-operation with the home, so that teaching and practice may be in harmony.

Addenda.

Since the presentation of the report of the Boston section, I have had access to "Annuales de Medecine et Chirurgie Infantiles." Beginning in May, 1901, there are three numbers giving an account of "Deviations of the Vertebral Column in the Schools of Lausanne," as observed by Dr. Combe, assisted by Dr. Scholder and Dr. Weith.

From actual tests, the author claims that the most common cause of scoliosis is vicious attitude, for which the predisposing causes are bad nourishment, bad air, feeble muscles, rapid growth with its attendant general weakness, and heredity. Speaking of the prevalence of scoliosis among girls, Dr. Combe asserts that the figures of orthopedists do not present all the aspects. For in primary schools, where the piano, embroidery, and painting is not added to the fatigue of the schools, both the author, and Krug, of Dresden, find the proportion nearly the same for both sexes.

Combe, of Lausanne.

1,270 boys	297 scoliosis	23%
1,024 girls	274 "	26.7%

Krug, of Dresden.

695 boys	181 scoliosis	26%
723 girls	163 "	22.5%

In all their statistics, Combe notes the fact that at about twelve years there is an arrest of the frequency of scoliosis. May not this arrest correspond to what the Boston section found? Namely, that between the ages eight to thirteen there was a notable increase of faulty positions in all schools.

From the following tables, Combe claims that development of muscle and vigor does not prevent curvature. Neither does he believe weakness to be a sure cause.

315 boys	Feeble muscles		82 scoliosis	26%
302 girls	"	"	48 "	23%
210 boys	Strong	"	62 "	27%
215 girls	"	"	71 "	33%

But two conditions that affect the first seven years of school life are considered of the utmost importance.

These are insufficient lighting, and the prolonging of position whereby the child, in order to rest himself, must take an asymmetric posture.

In the case of girls, Combe claims that their skirts increase the difficulty. For, with a tendency to rise from one side of the seat, the skirt folds present an extra force in causing the pelvis to incline itself and the lumbar column to form a convexity turned toward the middle of the desk. In this observation, it seems to me there may be possible explanation as to why the girls observed by the Boston section tended to twist their trunks rather than to slide down in their seats, as did the boys.

Points in desk construction and position of material and body in written work are noted as important factors. But Combe finds the greatest difficulty to be the adapting of the desks to the varying heights of children even of the same age. Hence he concludes that yearly measuring while most excellent, is insufficient in certain cases during certain years.

Then the article closes with a comparison of the attitudes of children in different writing positions.

	"Ecriture penche."	"Ecriture droite."
Nuremberg	24%	15%
Zurich	32%	12%
Munich	24%	15%
Wurth	65%	31%
Wurzbourg	28%	8%

Combe adds, "If the child is allowed to write as he desires, the figures will be found quite different." Thus the tendency observed by the Boston section and indicated by the comparison between the writing lesson and copying seems to be confirmed.

I like EDUCATIONAL FOUNDATIONS very much.

Ellsworth, Kan. W. W. MAZE, County Supt.

History of Education.

The following article is by permission reprinted, with some omissions, from *Mosher's Magazine*. It treats educational development from an avowedly Roman Catholic point of view. The purpose is to explain the motif of Catholic education. The non-Catholic will be interested in it particularly for the fair historical résumé it gives of education in the Christian era. The fact that the writer is professedly a Roman Catholic adds, in a measure, to the interest of the article, as most histories of education are written in an unmistakably Protestant spirit and fail to properly recognize the important services to the cause of education, which Dr. Pallen magnifies. The student of history will readily appreciate the peculiar value of the article.

The Motif of Catholic Education.

By Condé B. Pallen, LL.D.

(Continued.)

UNFORTUNATELY, the intensely creative energy of the Middle Ages began to wane in the fifteenth century. The accumulation of wealth in the dominant European states began to undermine the hardihood of both rulers and people. Political corruption grew apace, luxury and ostentation spread like a cancer, eating deep into the bowels of the social body, and the great ideal which had animated and lifted up the vast activities of the middle period waned and weakened. To trace the causes of this change in detail is beyond the scope of my present consideration.* What I wish to note is that with this deterioration came a change in the spirit of learning and a corresponding change in education. This was the period of the predominance of the movement called humanism. All learning sought its model in the classics; the excellence of letters depended upon the closeness of imitation to the writing of the ancients. The originality and the vigor of native life, which had so characterized the middle period, had passed away; all was rhetoric. The ideal of humanism was the polish of Cicero, imitation of a dead model. The spirit that had begot Cicero was dead and buried a thousand years and more. To revive that spirit was an impossibility; the Europe or the Italy of the fifteenth century was as far from the Rome of Cicero in spirit as we are. Humanism was, therefore, mere rhetoric, the lifeless closet-copy of a long-perished model.*

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* For an account of the literary, moral, social, and religious conditions of this period see the respective introductions to Vols. I. and V. of Pastor's "History of the Popes." The distinction between true and false humanism is admirably pointed out.

As a result, education in a large measure fell back into the old encyclopædic scheme of education for mere education's sake. The universal political character which had made it so powerful and effective during the Middle Ages yielded in great part to the literary tendencies of the times. Its vitality, for the lack of a definite end, ebbed away into a scheme of mere rhetoric. Humanism, instinctively feeling itself to be no true duplicate of the classics, sought its real basis in a scoffing rationalism; and the education of the day, naturally taking its cue from the character of its letters, or, rather, being their effect, fell under the same deteriorating influence.

The inroads of rationalism and the weakening of the political ideal in education became widespread in the sixteenth century.† The religious and political dissensions of the period contributed to the general confusion. It was at this time that the greatest teaching body the world has ever seen sprang into existence. In the latter part of the sixteenth century Ignatius of Loyola, a Spanish ex-captain, founded the Society of Jesus and drew up the famous Ratio Studiorum, or system of studies, which has always been the order's governing rule in the conduct of its pedagogical work.* This instrument possesses the stability of principle and the elasticity of adaptation; it is organic in character, a thing of growth, designed to meet the changes of the development of time without sacrificing the roots of principle. What was a crying need in the time of Ignatius was an organized system of education from the rudiments up to the higher studies, between which there had always existed a gap to be made up only by the private exertion of the student. This was thoroly supplied by the Ratio. Another urgent want was a system providing, not merely for the education of the pupil, but for the thoro formation of the master. As no other system had done, or has ever done since, the institution of Ignatius prepares and forms the master with a special view to the work of teaching. The specific purpose of the order is to teach, and the entire training of its members, covering a period of some fifteen years, follows up that purpose with a thoroness, care, and patience unequaled in the world's pedagogical history.

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* Rhetorical effect was the dominant trend of the literature of that day. The revival of the classics as sources of literary inspiration is commendable, but the slavish imitation of ancient writers as mere models is evidence of literary decay. The so-called Renaissance was, for the most part, of the latter character.

† *See* Mageveney, "The Jesuits as Educators."

But, above all things, the need of bringing back the educational world to the old ideal of education, under which the Church had led the barbarians from the wilderness of savagery to the temple of civilization, actuated and guided the founders of the society at a time when men were abandoning and forgetting the traditions and work of their mediæval forefathers whence had issued the blessings they enjoyed. Education must needs become again Christian in the full sense of the word; it must needs be dominated by the imperishable ideal; its purpose must again be to train and fashion the citizen of the city of God. Under this inspiration, tho bitterly antagonized, the Society of Jesus spread and developed its institution thruout the civilized world, the model of teachers as well as the most powerful influence in the educational world. In 1710 the society had a sum total of more than 200,000 students in the collegiate and university grades, all being formed at a given date, under one system of studies and government, intellectual and moral.*

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*See Hughes, "Loyola," in the "Great Educators" series.

As time advanced educational needs increased; the area of pedagogical activity was constantly widening. Extensive as was the spread of the Jesuit institution it could not keep pace with the growth of the sentiment which the institution itself had done so much to create. Wise and ardent minds saw the need of some organized force to take up practical educational work among the poor of the parishes. St. Vincent de Paul, the great apostle of organized charity, deplored this need and prayed for its remedy and lived to see his prayers answered. Jean Baptiste de la Salle, in the latter half of the seventeeth century, founded the great teaching institution of the Brothers of the Christian Schools, designed especially to teach the poor in the rudimentary branches. As of all great and fruitful undertakings, destined to become permanent, its beginnings were hampered by constant struggles against jealousy and ignorance. But, emerging triumphant from its persecutions, the institution grew and spread, until it is now co-extensive with the civilized world, its great army of teachers laboring with sacrificial love in the cause of the education of the poor wherever the Church carries the divine word to men.

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* Mageveney, "The Jesuits as Educators," gives a concise summary of the famous Ratio Studiorum; Hughes, "Loyola," a *more extensive* analysis.

In the nineteenth century the teaching congregations of both men and women multiplied tenfold; now they are legion.* Educational activity under the inspiration of the Church has more than kept pace with the spread of pedagogical interest thruout the civilized world. There is now practically no parish without its school. It is a universal axiom that a flourishing parish means a good school.

The educational system of the church is analogous to that system of political education which made Athens and Rome great, the system which educates for a definite purpose, with this difference, that hers is the Christian ideal. Her educational method in its accidents varies with the times and circumstances; in its substance it is ever one and the same. Education with her means the training and development of the whole being, all powers and faculties to be developed and ordered in concord and harmony, as radicated in the same essential unity of human nature, to one and the same definite end. With her the religious being is never separated from the intellectual and the moral character is one with the religious. She knows no division in man; she acknowledges no secular compartment marked off from his moral and mental being. The religious influence in the school-room is the ozone of its atmosphere. It is not how much a man knows, but his trained capacity to acquire, harmonize, systematize, and apply knowledge, that is the test of real education. In other words, true education aims at the formation of character and the development of power. In proportion to the ideal aimed at in an educational system will be its value in the formation of character.

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*In the United States alone the Church has 10 universities; 30 secular seminaries with 2,630 students; 79 religious seminaries with 1,998 students; 178 colleges for boys; 662 academies for girls; 3,811 parish schools with an attendance of 854,523 pupils. The Catholic population of the United States is estimated at 10,000,000.

An Early Physicist.

On the twentieth day of last November, the citizens of Magdeburg celebrated the three hundredth anniversary of the birth of Otto von Guericke, the most distinguished of the early German experimental philosophers.

Guericke made his reputation as an engineer in the defence of Magdeburg during the Thirty Years war. At the close of the war, however, he gave himself over to scientific study.

Torricelli had proved that air is by no means incorporeal and imponderable, but exerts a pressure upon all bodies. It was thus a matter of great scientific importance to produce a vacuum, in order to prove its effect upon bodies contained therein. Investigating this subject Guericke invented the air-pump in 1650. He also invented the air balance and the anemoscope. He was one of the first great experimental electricians and with his sulphur globes discovered the property of electro-repulsion. Besides this he made successful researches in astronomy, predicting the periodicity of the return of comets.

A bill is to be introduced at the next session of the Kansas legislature to amend the law governing the issuance of county certificates to teachers so that certificates issued in one county will be good in any other county in the state. Teachers are put to a great deal of unnecessary trouble under the present system in the matter of securing a new certificate when they move from one county to another. There seems to be no logical reason why a certificate issued in one county *should not* be good all over the state.

Study of Art and Great Paintings.

The Mathematical Substructure of Art.

By Frederick W. Coburn, Massachusetts.

THE conception of a numerical basis of the arts of design; of pictures, statues, and buildings constructed in accordance with definite ratios, such as 2:3, 3:5, or 5:7, is not entirely new. Analogy of the art of music with its elaborate code of mathematical laws has not infrequently been invoked as having application to the constructive and pictorial arts. Madame de Stael's characterization of architecture as frozen music has generally been accepted as felicitous. The dominance of rhythm thruout the whole range of art is recognized in most discussions of theoretical esthetics, and is rarely denied in the practice of capable artists. All worthy decorative design is built upon geometrical framework, all good pictorial representation in accord with simple principles of balance and harmony. Indeed, so generally well understood among critics is the prevalence of the mathematical in the artistic that consideration of special examples would seem to be of merely academic interest were not the subject rendered timely by ever growing popular desire to learn to look at art from the artist's standpoint, and by the furore over the study of composition which for three or four years past has been raging in the art schools. Certainly for the teacher who has to interpret art to young children no better help can be devised than to grasp firmly a few definite principles of arrangement and harmony.

A good starting point for the present discussion can be found in the work of two well-known teachers of composition, Mr. Arthur Dow, of Pratt institute, Brooklyn, and Dr. Denman Ross, Harvard university. Both men date their inspiration, I understand, from study of examples of Japanese art, pursued some years ago under Mr. Ernest Fenollosa, at that time curator of the Oriental collections of the Boston Museum of the Fine Arts. As a result of the feeling of these three men that composition, not representation, should be the basis of art instruction, a studio was opened in Boston at which a score or so of students learned to work in somewhat of Japanese spirit. The experiment was successful, and in 1895 Mr. Frederic B. Pratt induced Mr. Dow to transfer his activities to Pratt institute. A little later Dr. Ross organized his popular classes at the Harvard university summer school. His course in design now features in the architectural department of the university. The instruction given at these two institutions has wrought a revolution in methods of the art schools, and has already largely influenced those of public schools.

Work in Progressive Composition.

To describe at length the teaching of these two men transcends the scope of my article. What Mr Dow is striving for may best be apprehended from his excellent book (published by the Baker & Taylor Company, N. Y.) From it we learn that his lessons follow a regular order from simple to complex; from problems of relationship of geometrical figures thru arrangements of line, spot, and color. The student is kept experimenting, comparing. Always the appeal is to the faculty of selection, to the artistic judgment. One must be ever ready to answer the question, Which of these possible schemes is the more decorative?

So, too, with Dr. Ross's work, which differentiates itself mainly in being more immediately concerned with mathematics. His art deals with attractions and repulsions of spots of dark, and of color. The problems of *harmony* are treated as by a trained physicist as well as artist. A good statement of his now famous doctrine of balance may be made as follows:

The forces in a composition should be so arranged that they balance one another in regard to a common center. This common center is the center or a little above the center of the inclosing lines of the composition.

The force of a spot depends upon its measure (area) and its contrast with the surrounding tones. Equal forces balance on any straight line at equal distances from the center. Two forces equal in measure and contrast, or a small mass strongly contrasted with the ground in color or values and a large mass of less contrast (two equal forces) will balance each other at equal distances from the center.

Unequal forces balance each other on any straight line when their distances from the given center vary inversely as the forces. That is to say, a force near the center may be balanced by a force more remote from the center.

These principles underlie all orderly and well balanced composition, not always evident at a glance, not unliable to modifications and variations (of which Prof. Münsterberg has noted several); but still regularly present in art that is sane. Every capable artist employs them while he composes, and greatest credit belongs to Dr. Ross for having reduced them to a formula.

It is probable, moreover, that this work started by Dr. Ross of formulating artistic conceptions will be carried much further by him and by others. To indicate a line upon which further work of the same sort may be profitable concerns us now.

The Dominance of Ratio.

Covering all the space arts stands the general law of ratio, of which balance is only a special manifestation.

Composition implies a system of exact relationships that can be expressed numerically, of ratios such as 1:1, 1:2, 2:3, 3:5, and 5:7. Ratios involving larger multiplications of unity, as 19:21 or 29:37, are not ordinarily discoverable in good works of art. The mind wants to recognize order in creation. Symmetry and repetition, bad as they are in abuse, satisfy a normal craving of man in their use. Endless repetitions of cheap wall paper tire, but not so the repetitions of Zuni pattern. Primitive design is always distinguished by adherence to elemental ratios. Common to the early art of nearly every race we find the series of parallel straight lines of approxmately equal length, representing the ratio 1:1 repeated *n* times. Such series, if ruled to the same length with absolutely even spacing, bring about exceeding ugliness; but when only approximate exactness of ratio appears, the effect does not jar, tho it still lacks refinement. A more distinguished ratio consists in pairs of lines of unequal length presenting, say, 3:1 or 5:3, repeated *n* times. The wonderful simplicity that we observe in complex ornament, such as the Saracenic, would not appear but for the designer's adherence to the ratios of small numbers. Good buildings are invariably constructed out of definite units. We all like to note obvious relationships: that the tower looks to be twice the height of the church, the length of the transept two-thirds that of the nave. It matters not that these proportions do not really prevail in feet and inches. The height of steeple may be to the height of the ridge-pole as 137:60; but it needs must seem to the man in the street to be as 1:2. Herein many architects have been at fault in attempting to arrive at the secrets of the beauty of the Parthenon thru actual measurement of lengths of columns and architraves. The ratios thus obtained have, as Prof. George Lansing Raymond, of Princeton, pointed out, no esthetic significance *whatsoever*. The artists of the Periclean age possessed no subtle mathematical formulæ; they merely bore in mind the proportions of the Parthenon and other buildings as seen from the surrounding country. The apparent ratios were all simple.

So in all art. Ratio is essentially phenomenal rather than actual. Every noble picture or statue shows these relationships which seem to be approximately exact, but the verity of which the yardstick may or may not confirm.

Furthermore,ratios differ in strength and availability for artistic ends. Paintersof easel pictures are sensitive regarding the proportions of their canvasses. Every good composition is executed with constant reference to its bounding lines. In some figures one composes with difficulty; others lend themselves readily to expression of a wide range of ideas. The following ratios observed in the bounding lines of well-known pictures are worth noting: Correggio's Holy Night, 3:4; Mantegna's Concert of Children, 3:5; Perugino's Archangel Raphael and the Young Tobias, 3:7; Guido Reni's Aurora, 3:7; Andrea Del Sarto's Annunciation, 1:2; Daubigny's Springtime, 1:2; Troyon's Return to the Farm, 3:5; Puvis de Chavannes' Ste. Genevieve, 3:5; Lerolle's By the Riverside, 3:5; Corot's Paysage, 3:4; Bastien-Lepage's Haymakers, 23:4.

Equally important to note are mathematical possibilities within the rectangle. The artist in composing plays over his canvas as the musician plays upon the keyboard. Its nodes of interest he comes to feel, its strong tracts to employ, avoiding the weak places. He even has a formula, known to the practice of the studios, to the effect that odd places are strong, even places weak. That is, the geometrical center of a figure is weak, as are also the points midway between center and sides. To adopt a terminology suggested by the art of music, the seconds, fourths, and eighths should be avoided in the placing of principal objects while the thirds, fifths, and sevenths stand for tracts upon which the eye rest lovingly. In most good compositions the center of interest will be found near the geometrical center in one of the strong tracts. Similarly the center of the principal opposition mass, which often prevents undue concentration of the observer's attention upon a single point,is as a rule located in one of the odd places at greater distance from the center and on the opposite side.

Dividing lines occur at strong intervals. A sky-line cutting the horizon at two-fifths and three-fifths gives a more agreeable picture than one breaking it into halves, or into one-fourth and three-fourths. Series of dividing lines are most effective when disposed in odd-number schemes. For instance the repeating tree trunks in Puvis de Chavannes' L'Hiver present a study in sevenths.

The General Law.

In fact we find it an esthetic law that odd-number ratios are stronger than ratios of even numbers. The four leaf clover we treasure as a curiosity, but the normal leaf better satisfies the eye. Natural and decorative forms based upon combinations of three, five, and seven possess peculiar completeness. Of the pervasiveness of this principle, the art of lettering furnishes a good example. An E or an F is most interesting when the vertical stroke is divided into thirds or fifths rather than into halves and fourths.

In case of pictures and many other forms of decoration an important corollary to the above principle has to be stated. For complete harmony the ratio of the bounding lines must be repeated in the disposition of lines, tones, and colors within the composition. If the bounding lines are as three to five, then the interior arrangement should be one in thirds and fifths.

This law of repetition of ratio covers line, spot, and color. You may observe it reduced to lowest terms in flat-tinted decorative compositions of the poster type. The Japanese are past masters in this kind of simple harmony, and all the more subtle and elaborate compositions in black and white are closely bound together by ratios of relative darkness. If the tone of the darkest mass of a picture be represented by 100 and the brightest by 0, while the intervening masses stand at 60, 45, 25, 15, and 10, we have a harmony of tones in which the two lowest are to each other as 5:3; the next two, in ascending scale, as 3:2; the next as 5:3 and so on. Examination of good drawings will reveal the existence of such schemes of light and dark; where they are absent, one of the fundamentals of good art is wanting.

Good Color Made by Mathematics.

Color-values obey the same laws as values in dark and light. Tones of warm and cool in good art are arranged in numerically expressible ratios. Almost any Japanese print of an artistic period will illustrate the point. I have one in mind—some clusters of carnations in two tones, red and pink, relieved against a landscape in which the vertical planes, consisting of hills and river banks are greenish blue; the horizontal plane comprising a stretch of meadow, of greyish green. These four principal masses are keyed from accents of neutral tint in the foreground. The red of the flowers is about as far removed from neutral as is the intense blue of the distant hills. The pink appears to be about three-fifths as warm as the red, and the grey green about three-fifths as cool as the blue. This ratio is also that of the bounding lines.

Great colorists of all nations have worked in this spirit, aiming to arrange their tones in supporting series; not content to paint in slavish imitation of the photograph.

Possibilities of color combination outrival the combinations of whist, and the laws governing them are as scientific and exact as those of leads and second-hand play. But the relationships in good color do not depart from severe simplicity. That they explain themselves in mathematical terms some artists deny. The general conception of color is of something that can be arrived at best thru the medium of a temperament. The painter resents suggestion that it can be reduced to X:Y::Y:Z. Yet science has already helped the artist wonderfully in his use of color. The French "vibrists"—Monet, Sisley, Pizarro, and the rest—base their practice upon theories which they get from the French translation of *Modern Chromatics* by the late Prof. Ogden Reed. And there are many of us in this country who owe similar debt to Mr. Milton Bradley.

All I have hoped for in this brief treatment of a vast subject is to call attention to a new point of view in art teaching. Certainly recognition of the mathematical basis of the space arts leads to instruction that ought to be signalized by strong and consistent results.

Latest University Statistics.

The comparative student enrollment in the seventeen largest American universities is: Harvard, 5,468: Columbia, 5,367; Chicago, 4,296; Michigan, 3,764; California, 3,676; Minnesota, 3,505; Cornell, 3,281; Wisconsin, 2,884; Northwestern, 2,875; Yale, 2,804; Pennsylvania, 2,549; Nebraska, 2,289; Syracuse, 2,020; Indiana, 1,648; Missouri, 1,408; Leland Stanford Junior, 1,378; and Princeton, 1,345.

Harvard has 533 instructors, and Columbia, 536, the largest number in the country. Johns Hopkins has one instructor for every four students.

Teachers' Examinations.

New York State Uniform Examinations for Commissioners' Certificate.

(November 13 and 14, 1902.)

ALGEBRA.

1. Find the prime factors of (*a*) $3a^3+3b^3$; (*b*) $2ab-bc-2ad+dc$.

2. Find the value of x in the equation $\frac{a+1}{a+x}=\frac{b}{a-x}$

3. Reduce to simplest form $\frac{3}{a+1}-\frac{2a-1}{a+\frac{a}{3}-\frac{1}{3}}$.

4. Given $\frac{x}{3}+3y=7$ and $\frac{4x-2}{5}=3y-4$ to find the value of x and y.

5. Simplify $(x+y)^6-(x-y)^6$.

6. Reduce to simplest form $\frac{2a^2+5a+2}{a^2-4}\times\frac{a^2+4a}{2a^2+9a+4}$.

7. Find the square root of $12c^2d+a^2+4c^4-4ac^2-6ad+9d^2$.

8. Reduce the following quantities to the simplest form:

(*a*) $\frac{3}{8}\sqrt{\frac{5}{18}}$; (*b*) $\frac{1}{5}\left(\frac{7}{5}\right)^{\frac{1}{6}}$; (*c*) $\sqrt{\frac{1}{a-c}}$

9. Find the value of x in the equation $9x-35-2x^2=0$.

10. A has b dollars and B has a dollars. How many dollars will A have to give to B so that A's money will be c times B's money?

ANSWERS.

1. (*a*) $3\,(a+b)\,(a^2-ab+b^3)$; $(b-d)\,(2a-c)$.

2. $x=\frac{a(a-b+1)}{a+b+1}$. 3. $\frac{7a-4a^2-1}{3a^2+2a-1}$.

4. $x=3$, $y=2$. 5. $4\,(3x^5y+10x^3y^2+3xy^5)$.

6. $\frac{2a^4+13a^3+22a^2+8a}{2a^4+9a^3-4a^2-36a-16}$ 7. $a-2c^3-3d$.

8. (*a*) $\frac{1}{15}\sqrt{15}$. (*b*) $\frac{1}{15}\sqrt[3]{21}$. (*c*) $\frac{1}{a-c}\sqrt{ac}$.

9. $x=\frac{2}{15}\sqrt{-199}$. In other words, the equation is impossible.

10. $\frac{b-ac}{c+1}$.

HISTORY OF EDUCATION.

1. Give *a*. the greatest name in Chinese educational history; *b*. one of the man's noted sayings.

2. In India *a*. to which caste did the teachers belong; *b*. how were they paid; *c*. what was the nature of the discipline in their schools?

3. State three criticisms, either favorable or unfavorable, on Egyptian education.

4. What reason did Aristotle give for the education of women?

5. Contrast Athens with Sparta as to *a*. the liberty of the individual; *b*. the purpose of education; *c*. the number of noted men produced.

6. What was the attitude of Roman education toward the home and the mother?

7. Name three great teachers that the Benedictines produced.

8. In the feudal ages what is the nature of the education of boys during the second seven years of their lives?

9. What was the teaching of Comenius regarding *a*. the use of the senses; *b*. the order of subjects; c. repetition or drill?

10. Give *a*. the greatest name in the history of American education. *b*. In what state was he born? *c*. What was his principal work?

ANSWERS.

1. *a*. Confucius. *b*. "Shall I tell you what knowledge is? When you know a thing, to hold that you know it; and when you do not know a thing, to confess your ignorance."

2. *a.* The Brahmins or highest caste. *b.* They had no salary but depended upon gifts. *c.* The discipline was very mild. Reproofs were rare and bodily inflictions still more rare. It employed the pupil teacher-system, afterward used by Bell and Lancaster.

3. It was the leading type of an active national culture. It encouraged respect for woman, but did not advance her intellectual training. It was marked by extensive use of libraries. In Plato's time elementary education was nearly universal, but higher education was restricted to the wealthy. This was however all-sided, caring for mind, body, and æsthetic and religious culture. It gives the earliest example of endowment of research. Its main purpose was to conquer death and cause the influence of one's earthly career to transcend the limits of the grave. This promoted the virtues that were deemed essential, forming an admirable code of the duties which man owes to God and to his neighbor.

4. That she might properly train her children, and, by an intelligent understanding of the laws, uphold the state.

5. *a.* Individual liberty was greater in Athens; in Sparta the state was given almost entire jurisdiction over the child's education after he reached the age of six or seven years. *b.* The purpose of the Spartan education was military—to secure bodies which would withstand hardship, and characters prepared for the life of a soldier; the purpose of Athenian education was peaceful—the development of the individual toward the complete and beautiful in mind and body. *c.* Athens produced comparably more noted men.

6. It was conducted in the home, it honored the home, and it taught respect for the mother.

7. Wilfred, Alcuin, Thomas Aquinas, Abelard, Boniface, Duns Scotus.

8. He was sent to live with some friendly knight, where he was taught music, chess, and knightly manners.

9. *a.* Let everything be presented thru the senses. *b.* Proceed from the easy to the difficult, from the near to the remote, from the general to the special, and from the known to the unknown. The first studies were the mother-tongue, reading, writing, the catechism, singing, arithmetic, history,

and geography; then Latin, mathematics, and the sciences. *c.* "Fix firmly by frequent repetitions and drills." "Learn to do by doing."

10. *a.* Horace Mann. *b.* Massachusetts. *c.* His seventh annual report.

READING.

What doth the poor man's son inherit?
  Stout muscles and a sinewy heart,
A hardy frame, a hardier spirit;
  King of two hands, he does his part
  In every useful toil and art;
A heritage, it seems to me,
A king might wish to hold in fee.

What doth the poor man's son inherit?
  Wishes o'erjoyed with humble things,
A rank adjudged by toil-worn merit,
  Content that from employment springs,
  A heart that in his labor sings;
A heritage, it seems to me,
A king might wish to hold in fee.

—*James Russell Lowell.*

1. What lesson does the author aim to teach in this poem?

2. Give in literal terms the figurative expression *a.* "king of two hands"; *b.* "wishes o'erjoyed."

3. Select from the stanzas above *a.* an interrogation; *b.* a declaration. *c.* What is figurative language?

4. Copy the first stanza and mark it for inflection.

5. Name three books, other than school readers, suitable for supplemental reading in the fifth grade. Name the author of each and state the particular benefit to be derived from each.

ANSWERS.

1. That nature's gifts are greater than those of inheritance.

2. *a.* With his hands trained to do his work skilfully. *b.* His wants are simple and easily supplied.

3. *a.* What doth the poor man's son inherit?
   b. King of two hands, he does his part
   In every useful toil and art.

c. Figurative language is that which employs figures or metaphors to suggest another than the literal meaning.

4. What doth the poor man's son inherit′?
Stout musclesˋ and a sinewy heartˋ,
A hardy frameˋ, a hardier spiritˋ;
King of two hands′, he does his part
In every useful toilˋ and artˋ;
A heritage′, it seems to me′,
A kingˋ might wish to hold in feè.

5. (1) Stories of the Odyssey by Church. This will aid the pupil in understanding the allusions as he reads poetry later. (2) Martin's Stories of New York. It teaches patriotism and fixes events by the interesting way it treats of the subjects. (3) Boys of Other Countries by Taylor. It helps in the study of geography by giving vivid descriptions of life in other countries.

(The answers here given are copyrighted by C. W. Bardeen, Syracuse, N. Y.)

BOOKKEEPING.

NOTE.—In writing this paper, candidates may use either the single or the double entry system.

Memoranda of.............(person taking this examination).

Addison, N. Y. September 1, 1902.

RESOURCES : Merchandise, as shown by inventory, $6,450. Cash in the Bank of Addison $2,575. Account of Joseph Reed $225. James Ewing's note $150, dated May 3, 1902, time 4 months.

LIABILITIES : Account of John R. Clark & Company, Binghamton, $850. My note in favor of Henry Young, New York, for $500, dated September 1, due January 1, 1903.

September 2. Sold George Stearns a suit of clothes for $28, received in part payment, cash $12. Sold William Wentworth on account coat and vest $14. Paid for work on store $7.50. Cash sales not otherwise noted $48.25.

September 3. Bought of Peck Company, Syracuse, 8 suits men's clothes at $7.50. Sent in payment check on bank of Addison. Sold J. Crane on note for 30 days one suit $22.50, overcoat $20. Cash sales $49.80. James Ewing paid his note in full.

September 4. Accepted draft of John R. Clark & Company at 3 days sight in favor of John Morrison, in payment of my account. Paid rent $50. Sold Fred Green on account 1 pair trousers $6, 2 work suits at $8, 2 work shirts at 50c. Cash sales $22.40.

September 5. Joseph Reed paid his account in full. Paid clerk hire $15. Sold John Henderson on account, sundry furnishing goods $2.75, suit and overcoat $40. Cash sales $54.25.

September 6. Paid acceptance of 4th inst. Sold George Boynton, on account, 1 waterproof coat $7, 1 hat $3. Paid sundry expenses $9. Cash sales $41.50.

Inventory at close of the week shows Mdse. on hand to the amount of $6,200.

1. Enter in proper book the stock account of your business.

2-3. In the same book make all other entries.

4. Make all cash book entries.

5-6. Post accounts and balance cash book and ledger.

7-8. Make a formal statement of condition of business, showing resources and liabilities ; gain or loss.

9. Write note mentioned in transaction of September 3.

10. Write draft mentioned in transaction of September 4, showing acceptance.

ANSWERS.

1. Addison, N. Y., Sept. 1, 1902.

✓	——— began business with the following resources and liabilities:			
	RESOURCES			
✓	Merchandise, per inventory............	$6450		
✓	Cash, in bank at Addison.............	2575		
✓	Joseph Reed, account.................	225		
✓	James Ewing, note, dated May 3, 1902, time 4 months................	150		
	LIABILITIES			
✓	John R. Clark & Co., Binghamton, acc't............................			$850
✓	My note in favor of Henry Young, N. Y., for $500 dated Sept. 1, due January 1, 1903.			500

2, 3. This question seems to call for detailed journal en*tries, but* we omit those given in cash book.

2, 3.

DAY BOOK

Sept.	2	GEORGE STEARNS *Dr.*				
		To suit of clothes	$ 28			
		WM. WENTWORTH *Dr.*				
		To coat and vest	14			
	3	PECK & CO. *Cr.*				
		By 8 suits @ 7.50			60	
		Dr. to check, Bank of Addison	60			
		J. CRANE *Dr.*				
		To one suit 22.50				
		overcoat 20.	42	50		
		Cr. by note, 30 days			42	50
	4	JOHN R. CLARK & CO.				
		To accepted draft	850			
		FRED GREEN *Dr.*				
		To 1 pair trousers 6.				
		2 work suits @ 8 16.				
		2 work shirts @ .50 1.	23			
	5	JOHN HENDERSON *Dr.*				
		To furnishing goods 2.75				
		suit and overcoat 40.	42	75		
		BANK OF ADDISON* *Cr.*				
		By draft, John R. Clark & Co.			850	
	6	GEO. BOYNTON *Dr.*				
		To 1 waterproof coat 7.				
		1 hat 3.	10			
		Inventory, 6,200				

*This must have been paid by the bank, as there was not cash on hand to pay it; but if accepted payable at the bank it was not due till the 7th.

4.

CASH BOOK

Sept.	2	George Stearns, on acc't	$ 12			
		Work on store			7	50
		Sales	48	25		
	3	Note James Ewing	150			
		Sales	49	80		
	4	Rent			50	
		Sales	22	40		
	5	Joseph Reed, in full	225			
		Clerk hire			15	
	6	Sales	54	25		
		Sundry expenses			9	
		Sales	41	50		
			$ 603	20	81	50
					521	70
		Balance	$ 521			

Bank of Addison

Sept.	1	To balance	$ 2575	
	3	By check, Peck Co		60
	6	By draft, John K. Clark & Co.		850
		Balance		1665
			2575	2575
		Balance	1665	

5, 6.

Bills Receivable

Sept.	1		1	$150		Sept.	3		2	$150	
	3		2	42	50		6	Balance		42	50
				192	50					192	50
Sept.	8	Balance		42	50						

Bills Payable

Sept.	6		3	$850	Sept.	1		1	$500
	6	Balance		500		4		2	850
				1350					1350
					Sept.	8	Balance		500

1902

Merchandise

Sept.	1	Inventory.	1	6450		Sept.	2		1	$28	
	3		2	60			2		1	14	
	6	Loss & gain	1	66	45		2		2	48	25
							3		2	42	50
							3		2	49	80
							4		3	23	00
							4		3	22	40
							5		3	42	75
							5		3	54	25
							6		3	10	00
							6		4	41	50
							6	Inventory..	4	6200	
				6576	45					6576	45
Sept	8	Inventory.		6200							

EXPENSE

Sept.	2	Cash.....	1	7	50	Sept.	6	Profit & loss..	1	81	50
	4		2	50							
	5		3	15							
	6		3	9							
				81	50					81	50

JOHN R. CLARK & CO.

Sept.	4		2	$850	Sept.	1	1	$850

JOSEPH REED

Sept.	1		1	225	Sept.	5	3	225

GEORGE STEARNS

Sept.	2		1	28	00	Sept.	2		1	12	
							6	Balance....		16	
				28						28	
	8	Balance...		16							

WM. WENTWORTH

Sept.	2		1	14	00	Sept.	6	Balance....		14	
	8			14	00						

FRED GREEN

Sept.	4		3	23	00	Sept.	6	Balance.....		23	00
	8	Balance...		23	00						

John Henderson

Sept.	5		8	42	75	Sept.	6	Balance.....		42	75
	8	Balance...		42	75						

Geo. Boynton

Sept.	6		3	10	00	Sept.	6	Balance.....		10	00
	8	Balance...		10	00						

7, 8.

Resources and Liabilities

Sept. 1	Mdse.........	6450		John R. Clark & Co.....	850	
	Bank of Addison.	2575		Note Henry Young......	500	
	Joseph Reed......	225		Balance, net assets.......	8050	
	Note Jas. Ewing.	150				
		9400			9400	
Sept. 6	Mdse.........	6200		Bills payable.............	500	
	Cash...............	521	70	Balance, net assets.......	8034	95
	Bank of Addison.	1665				
	Bills receivable...	42	50			
	George Stearns...	16				
	Wm. Wentworth	14				
	Fred Green.......	23				
	John Henderson.	42	75			
	Geo. Boynton:...	10				
		8534	95		8534	95

Profit and Loss

Sept. 6	Mdse.........	66	45	Sept. 6	Expense..	81	50
	Net loss...........	15	05				
		81	50			81	50

BALANCE SHEET. SEPT. 6, 1902

			Loss	*Gain*	*Resource*	*Liability*
Resources and Liabilities....	1350 00	9400				
Cash, in hand and bank......	3178 20	991 50			2186 70	
Fred Green.................	23				23	
John H. Henderson........	42 75				42 75	
Geo. Boynton.............	10				10	
Merchandise...............	6510	376 45		66 45	6200	
Bills receivable............	192 50	150			42 50	
Bills payable..............	850	1350				500
George Stearns............	28	12			16	
Wm. Wentworth...........	14				14	
Expense...................	81 50		81 50			
	12279 95	12279 95	81 50	66 45	8534 95	500
Net Loss................				15 05		
			81 50	81 50		
Net credit...............		8050				
Net loss.................		15 05				8034 95
Present worth............					8534 95	8534 95

9. $42.50. ADDISON, N. Y., Sept. 3, 1902.

Thirty days after date for value received I promise to pay to (name of pupil), or order, forty-two$\frac{50}{100}$ Dollars.

J. CRANE.

10. $850. BINGHAMTON, N. Y., Sept. 4, 1902.

At three days sight pay to the order of John Morrison eight hundred fifty $\frac{00}{100}$ Dollars, value received, and charge to the account of JOHN R. CLARK & Co.

To (name of pupil)
Addison, N. Y.

The endorsement written across the face in red ink, should be "Accepted, payable at the Bank of Addison (signed by name of pupil), Sept. 4, 1902."

DRAWING.

NOTE.—Use compasses for drawing circles. Take measurements from ruler. The measure of all work shall be at least one inch.

1. *a.* Name three common flowers or weeds, the blossoms of which are called "pink." *b.* What hues in the spectrum scale contain any portion of blue?

2. *a.* Draw by geometric process four horizontal parallel lines, 4″ long, and ½″ apart. *b.* On a base line 2″ construct a square by geometric process.

3. *a.* In a working drawing what dimension is shown in the plan that is not shown in the front elevation? *b.* Draw to illustrate answer given in *a.*

4. *a.* What is the projection of a line parallel to a plane? *b.* What is the projection of a line perpendicular to a plane?

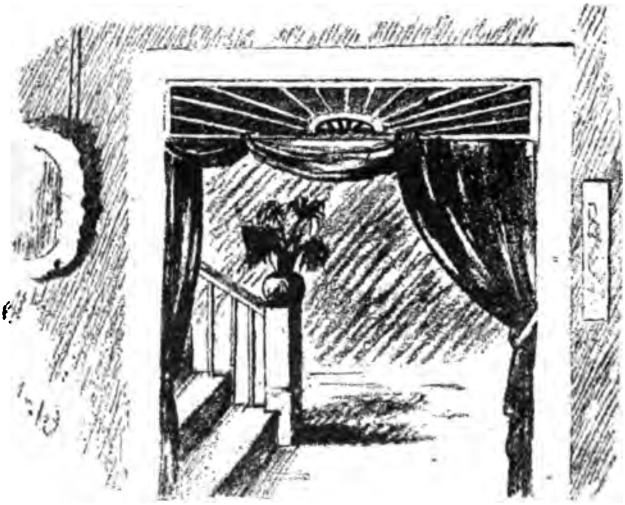
5. Sketch freehand to represent the back of a chair against a dark wall—masses preferred.

6. Place in perspective a square three feet on a side. The left side forms an angle of 30° with the G. L. and the forward point touches the G. L. The whole square is 2′ to the left of the L. D. Space between E. L. and G. L. 2¼′; L. D. 8′; scale ¼″ to 1′.

7. Sketch freehand to represent a corner shelf upon which stands a candlestick and candle.

8. *a.* Draw to represent a cylinder 2′×1′. *b.* Modify this cylinder to represent some object of utility.

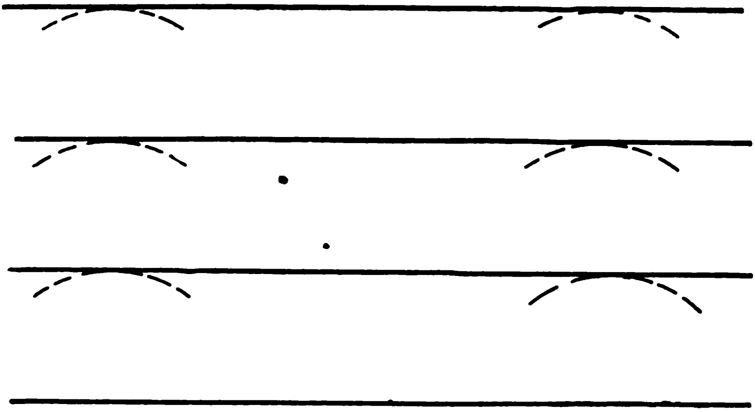
9-10. Copy sketch.



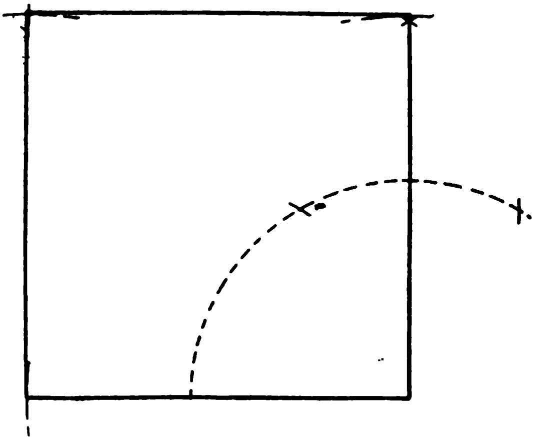
ANSWERS.

1. *a.* Some carnations, phlox, and sweet peas. *b.* Green-yellow, yellow-green, blue-green, green-blue, violet-blue, blue-violet, red-violet, and violet-red.

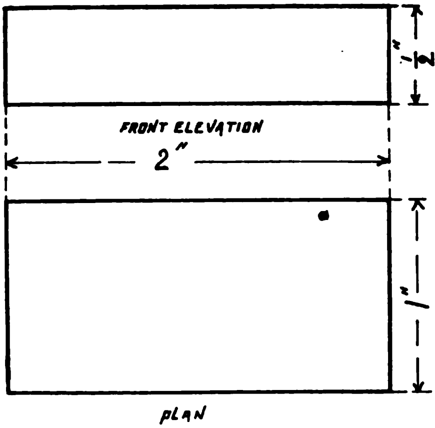
2. *a.*



b.

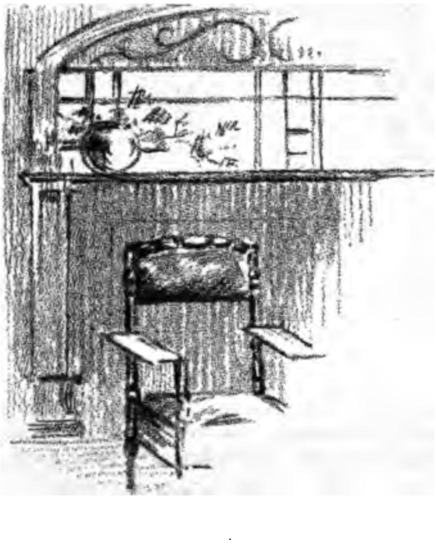


3. *a.* The width from front to back. *b.* In the drawing of a block ½″ high, 2″ from left to right, and 1″ from front to back, the plan shows the width from front to back.



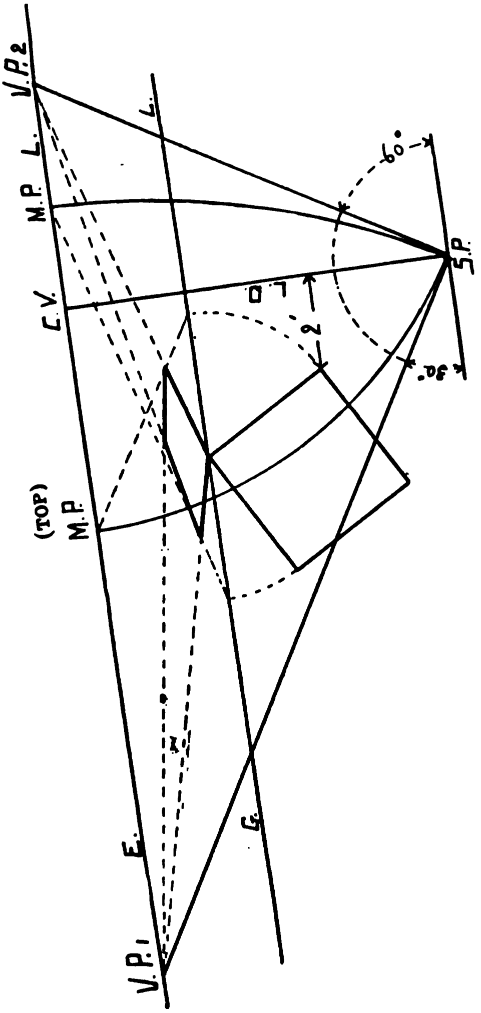
4. *a.* It depends entirely upon the plane to which the line is parallel. If it is parallel to the picture plane it retains its exact character in the projection except that it may be shorter if it is located beyond the picture plane. *b.* It depends entirely upon the plane to which the line is perpendicular. If it is perpendicular to the picture plane in the projection it vanishes toward the center of vision.

5.

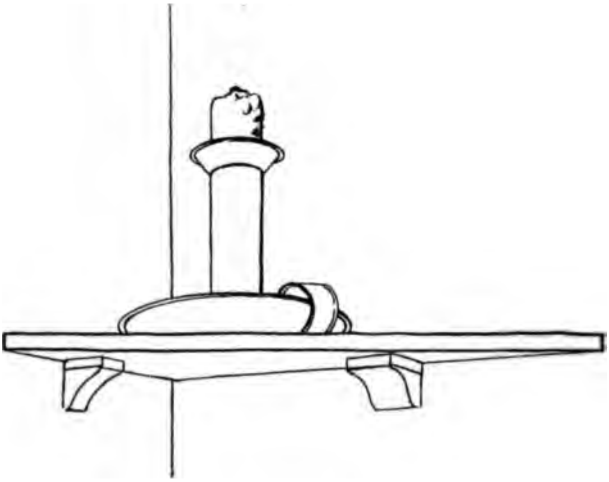


FOUNDATIONS.

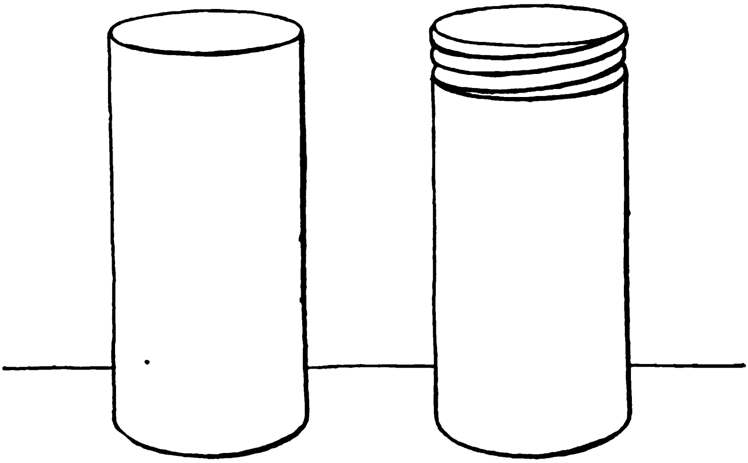
6.



7.



8.



a. *b.*

9-10. Same as question.

History of Our Times.

[illegible]

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(See *Our Times* for January 1 and January 15.)

Describe the work on the tunnel under the Hudson river. How is compressed air used in the work? What great work of a similar character has the Pennsylvania railroad undertaken?

Tell why the Caribbean sea is of very great importance to the United States.

Why is it proposed to change the date of the term of the president and Congress?

Describe the method of surgery employed by Dr. Lorenz.

Tell about Great Britain's campaign against the Somalis. In what way does religion figure in this war?

Give a sketch of the life of the late Archbishop of Canterbury.

What caused the trouble between the powers and Venezuela, and how will the dispute be decided? Why was it advisable for President Roosevelt not to act as arbitrator?

What are the prospects for wireless oceanic telegraphy, according to Marconi?

When was the cable to the Hawaiian islands completed?

What is the object of the organization of the National League of Independent Workmen of America?

Where was a Carnegie library lately opened?

What tariff measures are now before Congress?

Describe the crowning of Edward as Emperor of India.

What noted Spanish statesman lately died?

What danger is threatened in Morocco?

Who is Brazil's new president? What is the most important question in that country at present?

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MARCH 1903

EDUCATIONAL FOUNDATIONS

A Monthly Magazine of Pedagogy and General Culture *for* Teachers, Normal Schools, Training Classes, Reading Circles and Home Study

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Educational Foundations

Ossian H. Lang, Editor.

Vol. XIV. MARCH, 1903. No. 7.

Dr. Edward R. Shaw, who was recently elected to the superintendency of the schools of Rochester, N. Y., died on February 11, at Yonkers, N. Y. His was a life wholly consecrated to teaching. He taught in country schools, was principal of the high school at Yonkers, N.Y., served as college and university professor, was dean of the first university school of pedagogy in America, organized and supervised an experimental school, conducted teachers' institutes, lectured on educational subjects before professional and general audiences, wrote and edited school books, and made valuable contributions to American pedagogical literature. All of his many-sided activity was confined to the field of education. So strong were his teaching instinct and his passion for direct contact with the problems of the school-room that not long since he seriously conferred with the writer concerning the wisdom of his resigning his university professorship to accept a place as principal of the two-grade village school of his native town.

Dr. Shaw was an enthusiast, and readily attached himself to an idea, a plan, or a person that deeply appealed to him. If there were disappointments because of the brevity of some of these attachments, it should also be remembered that this quality drew from him some of the highest services he has rendered to pedagogy. He was as human in his failings in this direction as was Pestalozzi.

It was his enthusiasm that stirred Dr. Shaw to work with all the fervor and strength of his mind for the development of the idea that gave to the world the first real university school of pedagogy. Without him the plan could probably not have been made acceptable to the authorities of a university. It was he who won for the school the respect of the educational leaders. It was he who gave dignity to the organization, the work, and the degrees of the institution. The importance of his pioneer work in this particular field is not at present as generally realized as some day it must be when the perspective of history is applied.

It was his enthusiasm which coaxed from him many weary hours and days and years of study and research to establish correct standards of school hygiene. The book in which he summarized the results of his work in this particular department won him the highest encomiums of educators and specialists in hygiene, and is to-day the best treatise on the subject in the English language. Had he left to the world nothing but this one work, his right to be numbered among the benefactors of the race would still have been securely founded. Aside from this and his school-books, of which there is a considerable number, Dr. Shaw published several manuals for teachers, among which the "National Question Book" is perhaps the best known. He also founded a society for the Comparative Study of Pedagogy, under whose auspices appeared a translation of Ostermann's famous monograph on "Interest as Related to Education."

Mr. Gilbert writes that in his article for April he will discuss how the school organization may, thru its various forces and agencies, magnify rather than minimize the teacher; how common courses of study, common plans of work, may be made to strengthen the teacher and increase his freedom; how supervision may be made a help rather than a hindrance, and how a living unity may be substituted for a dead uniformity. This question of the freedom of the teacher is a most important one.

School Administration.

By Charles B. Gilbert, New York.

The Place of the Teacher in the System.

WE have discussed in the previous articles the administration of the internal affairs of the school, the employments in which the children are engaged, the conduct of the pupils, what it should be, its underlying principle and the methods of securing it, all together constituting school life. The teacher has been taken for granted. It is now time to discuss the teacher specifically, to determine just what is his place in the scheme of school organization and administration and how he should conduct himself toward the system as a whole, and in particular toward his own class of pupils.

The Teacher Makes the School.

Dr. Arnold Tompkins, whose fine definition, "The school is a spiritual union between teacher and pupils," has already been quoted in these articles, has also said that "the school in its last analysis consists of the self-educating pupil." I cannot but think that Dr. Tompkins, usually so astute and exact, has here slipped. The self-educating pupil is not a school at all; he is simply a self-educating pupil. An aggregation of self-educating pupils do not constitute a school any more than do any other aggregations of people. The one characteristic which distinguishes the school from other collections of people, is the presence of the teacher. In more senses than the popular one it is the teacher who makes the school.

The world is full of people who are educating themselves consciously or unconsciously, who are utilizing all the great agents and forces of life as means of spiritual growth, but only in a figurative sense is the world itself a school. The figure consists in the personification of these various agents and forces and even of life itself and treating them as teachers. There is no school without a living teacher entering, to some degree, into the lives of the pupils, forming some sort of spiritual union with them. It is as true in the practical sense as in the philosophical that the teacher is the school.

Smoothing the Teacher's Path.

Every school administrator knows that his one serious business is to secure good teachers. Courses of study are important and a good school is more easily secured with a good course of study than with a poor one. Proper organization is important; good school-houses are important; good text-books are important and all the appliances which may be used to further education, but none of these alone nor all of them together constitute a school or can make a good school, and the good teacher *can* make a good school if any or all of these concomitants and aids are lacking; hence it follows, since good teachers are not limited to any one locality, or produced at any one institution or by any one method of training alone, and good schools are found in all places, under most unfavorable circumstances and coming from the least promising sources, that it becomes the chief duty of the executive authorities of school systems everywhere; first, to secure the best possible teachers, and then to remove, in so far as possible, all obstructions from their paths, to give them free scope and to aid them in their work in every conceivable way. All the machinery of great school systems, local, state, and national, has for its aim, properly, this one thing, to make it easier for the teacher to teach well.

Scope of the Teacher's Individuality.

In the small private school, in the rural school, and in most of the schools found in the earlier history of education in this country, the teacher was all in all; the teacher made the school; he was expected to make the school; if the school was good, it was to his credit, if bad it was his fault. This was not merely theoretically but practically true. The best type of school depending wholly upon the teacher is the rural school. Here the interference with his work is very slight indeed, he is compelled to employ his own initiative, make his own plans, organize his institution, and execute his plans. Young teachers, coming from training institutions, are frequently urged to teach rural schools for a while, in order to develop the power of initiative, of independent action, thru their necessary exercise in the professional solitude of the country school-house, and it is good advice.

Many of the strongest and best teachers and educational leaders that the country has ever known have received their first impulse, their versatility and breadth of view, and the ability to meet new difficulties which have made them great, in the small, unpainted schoolhouse in the remote country district where they began their discouraging work. Here they were required to study their pupils and give them work suitable for them, to devise their own methods, to meet emergencies, often serious, quickly and firmly. In the country school that is good for anything, the teacher is "it." Alas, that in any system of schools he should ever cease to be "it,' but there is, unfortunately, in the development of large institutions, a tendency to subordinate the individual, and to destroy individuality. This is particularly true in great school systems. It seems almost inevitable. The demands of the organization itself are so great, it requires so much executive power to keep the machine running, that the machine itself attracts undue attention, and we are in danger of forgetting that the business of the school is to teach individual children, and not simply to run along smoothly as part of a machine. This worship of machines is the most debasing kind of fetish worship. It destroys the power to judge of values and, like all worship of inferior gods, it subordinates the higher ends to the lower.

Tyranny of Machines.

Frequently in our great city systems, teachers are judged by their ability to run along smoothly in a well-oiled machine rather than by their power of inspiration, their ability to uplift, encourage, strengthen, and really teach children. I have known teachers full of the love of youth, possessed of extraordinary inspirational power and ability to make children think, work, and learn, driven from the school system because they did not readily untie red tape. We too often forget that the school system is useful only so far as it makes it easier for the teacher to teach, that every unnecessary burden, every extraneous demand upon the teacher's energies, every thing which distracts his mind or takes his time away from the one purpose of his work, that is, teaching the children, is a positive injury. When the machine grinds out the initiative of the teacher and makes him a mere tool, granted the privilege of imparting a little carefully-prepared dessicated information, freezes his soul out of the work, then it is time to smash the machine, and there are countless machines all over this land that need to be smashed.

I observe a constant tendency to organize school systems like factories with a head boss, sub-bosses, and hands. The very term hands is most suggestive. Heads belong to the bosses; hands have no use for them; hearts belong to neither.

I repeat, the only function of the school system is to help the teacher to teach; not to do it for him and not to get in his way, but to remove every unnecessary obstacle and to provide every possible aid in order that he may exercise to the full his highest powers for the sole purpose of helping children.

Perhaps the worst form of machine domination is that which places undue stress upon statistics and makes of the teacher a mere compiler of figures. Great marking schemes have been devised by school boards, school superintendents, and the devil to prevent teachers from teaching with their whole souls; schemes for marking children upon all conceivable points, which require brain-racking study, burning of the midnight oil and, it must be confessed, even imagination, to an awful extent.

I will speak of the effect of this sort of thing upon the children later. The effect upon the teacher is almost as bad as upon the children. As such systems lead children to study for marks, to behave for marks, to cheat and lie for marks, as well as to be envious and hateful and narrowly exacting, so they lead teachers to teach for marks, control for marks, to put the whole stress of their work upon the getting of marks, and they, too, sometimes are led to cheat for marks and to lie for marks.

Immoral Organization.

The evil of all this thing is easy to see. Any method of organization or of work which distracts the attention from the real end, and forces it upon a secondary end, is immoral. As I said in speaking of "The Morale of the School," the great evils in life result from placing undue stress upon secondary ends; upon the accumulation of wealth instead of the proper expenditure of wealth; upon acquiring power instead of upon the proper use of power; upon getting rather than giving.

To force teachers to continually drill along narrow lines in order that marks may be secured is to take away their spiritual freedom and to degrade them. The teacher who is forever harassed lest her pupils shall not pass, naturally is unable to give her whole attention to the needs of the children and to their supply.

The rural school teacher, if of the right sort, studies John and William and Susan, and decides that for John's good he should do this; William, for his good should do that; and Susan, for her good, should do that; but the machine-made, machine-driven teacher, in a system having no such freedom of action, treats John and William and Susan all alike (they must all take the same brimstone and treacle because it is good for somebody) and is not allowed to exercise her own judgment and her natural interest in their spiritual well-being. This is not only bad for the children but, if possible, worse for the teacher. They may recover, because their school days fortunately end some time; the teacher's fate becomes fixed, as his school days never end.

Another evil which is finding its way into our larger cities is the marking of the teachers themselves. A superintendent and a body of supervisors or a body of superintendents are employed, not to instruct, inspire, and help the teachers, but to mark them. I know of cities in which supervisors go about from school-room to school-room, note-book and pencil in hand, sitting for a while in each room like malignant sphinxes, eyeing the terrified teacher, who in her terror does everything wrong, and then marking her in that little doomsday book. Such supervisors' paths, like those of reckless automobilists, are strewn with the dead bodies of hopes, and ambitions, and nerves. The reasons given are that some teachers will do wrong and hence a system of espionage and terrorism is extended, like the clouds of heaven, over all alike. This, of course, instead of correcting the evil, increases it and creates new ones undreamed of before.

Any system of supervision which tends to destroy the self-respect of the teacher, to weaken his consciousness of his responsibility to his own conscience, to belittle his office, and especially to humble him in the eyes of his pu- s, is vicious in the extreme. Better no system than such a system, and this is the almost inevitable tendency of all great systems.

Need and Dangers of Organization.

The reasons are easy to find. As population becomes congested and schools multiplied, ordinary economy requires unification, condensation, and division of labor. Schools must be grouped and graded, that is, children who are approximately alike in power and in attainments must be put together, placed in the charge of teachers who are particularly well adapted to their conditions. It becomes impossible for a single teacher to carry a single child thru a long course of instruction. Schools must be so organized that the child can pass from teacher to teacher without undue loss or friction.

The course of school education should be continuous and without shocks, hence as systems grow increasingly closer organization is necessary; over each group of teachers there must be placed a head to see that the organization is maintained, that each one does his part, that the children move along from class to class as their growth requires without set-backs or loss. As communities become still larger there must be many of these groups of schools with their teachers and children. These must be organized so that the children may pass from one to another without loss, and there must be heads over these groups so that a complete organization grows up in the course of time, organized superficially somewhat after the manner of the army with a principal officer and the necessary subordinate officers of various grades. These officers, endowed with large power, naturally come to regard themselves as of greater importance than their subordinates and to consider it their chief vocation to keep the machine running, until in time the machine itself is so magnified in their sight as to appear the great thing. So the education of the child, for which the machine was created, is too frequently subordinated to the running of the machine, while the teachers or "the hands" have no consideration whatever. They are there not to be educated nor to educate, but to carry out the behests of their superior officers in such a way that there shall be no friction and as little discomfort as possible for these officers; that is, we continually forget that we, the school officers and the school machine itself exist but for one purpose, to help the teachers teach, and that when we cease to do that we have ceased to have the right to exist.

Importance of the Teacher.

The most precious possession of a school system rightly viewed is the teacher's devotion to his work. Any plan of organization, any method of administration or supervision which lessens that, which diverts the teacher's energy into any foreign channel, is an evil. In the office of every superintendent and in the note-book of every supervisor should be written, *the teacher is the school*, and the daily inquiry of every such officer should be, how can I stimulate in all the teachers under my supervision love for their work, self-respect, a feeling of independence and an ambition to do better teaching than ever before or than anybody else has done.

I recall one superintendent whose favorite phrase was "I will put the screws on." This phrase suggests the thought that he might have been a carpenter, but he was not, he was an inquisitor.

I have thus fully and with so much reiteration insisted upon the importance of the teacher in school that I fear that I have not time in this article to show how the teacher's freedom may be conserved and the teacher's power developed. I may, however, mention a few points and in a later article enlarge upon them.

Freedom Essential to Efficiency.

The school system is but an aggregation of schools, that is, of classes of children with their teachers so organized as to raise to the maximum the efficiency of each teacher, that is the theory. The great essential to real efficiency is freedom. I do not mean by freedom license or even liberty to do as one pleases, but the ability and the possibility to direct one's energies with intelligence and purpose to the highest results possible.

Such freedom is primarily internal rather than external, and for the teacher it begins far back of the organization, far back even of the act of teaching. The first steps in freedom must be taken by the individual. The teacher must be free from ignorance, from prejudice, from undue pride, from the debasing pressure of false ambition, from unwillingness to learn or to be guided, that is, the teacher must have a free soul in the Pauline sense. That is primary. Now suppose such a teacher has been elected to a position in a school system; this internal freedom must be preserved, and added to it must be a certain amount of external freedom, freedom to exercise native and acquired powers without undue restraint or perversion.

The Freedom of Co-operation.

There is a higher freedom than that of the individual in solitude. It is the freedom which comes from association and co-operation; for an individual who has become an intelligent and conscious member of society, contributing of his best freely to the common good, is free to draw upon the community for a vast increment of power. The individual who has become a co-ordinate member of a free community is enormously magnified, is a very much larger being than the same individual in solitude. The society becomes his larger self thru which he can do greater things than when alone; by its protection and help he has become free from innumerable trammels and hindrances with which alone he was unable to cope. A true society is a great instrument of freedom thru which each *one is able* to render vastly greater service than when alone, but when society goes further than this and checks the exercise of individual power, unduly restrains individual initiative, seeks to turn all the energies of each member into a single channel made by a single directing mind, then there comes a distinct loss of freedom and the individual dwindles again.

Possibilities of Urban Schools.

It ought to be possible in a school system for each teacher to do vastly better work than a rural school teacher can do, because while contributing his part to the general stock of knowledge and skill and inspiration, he can draw without limit upon that accumulated stock himself. Each teacher can learn from the other teachers, for wisdom is communicable. If the heads of the system are wise and possessed of inspirational force, the teacher can add to his power from their wisdom and inspiration. The system properly conducted substitutes co-operation, common interests, for isolation and individual interests. The urban teacher ought to be a very much larger and wiser and better teacher than the rural teacher. In some instances this is the case. Our greatest teachers are not country school teachers but city school teachers because it is possible in an urban system to become greater; there are more aids, more stimuli, more nutriment available. But the teacher, may avail himself of these only when the method and plans of organization and supervision make it possible; when the school board and school superintendent and supervisors consider it their part primarily to contribute the largest share of inspiration and wisdom to the common stock and secondarily to act as distributors of this common stock to the teaching forces. And it is a sad sight to see such enormous possibilities for good sacrificed by the pettifogging, red-tape methods prevalent in so many of our systems; to see machines exalted above the free-souled teacher.

Child Study.

Some Results of Child Study.

By John Dewey, Chicago University.

[Adapted for Educational Foundations from a stenographic report of an extempore discussion at the N. E. A.]

THE chief thing child study has done is that it has regenerated pedagogy and psychology for teachers. The first pedagogical maxim "from the concrete to the abstract," was often disregarded by pedagogists themselves. The concrete for the teacher is the mind of the child, not mind in general, but a particular mind, a particular spirit in an individual child. Child study has led us to base methods on the actual characteristics of the actual concrete being under instruction. Classifications were laid down of the various faculties of the mind, memory, imagination, reasoning, and rules given for training each. There was smooth sailing when these were considered only theoretically, but when applied to children it was discovered that these were not faculties but live beings. A person from Mars might study purely theoretical pedagogy, and still not be able to identify a human being, since analysis is carried so far that it would not put one in communion with faculties when bound together in a human being.

Child study has served to put emphasis on training a child from the right basis. The teacher who really knows the subject to be taught and the nature of the individual mind which is being dealt with, can develop his own devices with better results than he could attain in learning recipes having not much to do with the child.

Child study has put into proper perspective the sort of training which the teacher needs and has brought a vitalizing element into his work. We teachers are the most conscientious class in the world, often too conscien-

tious in following a type of pedagogical recommendatio
which bring no adequate return. Child study vitaliz
the truths grasped after.

Child study has brought about a different conceptio
of education itself. One of the late advances in educ
tion was the doctrine of drawing out instead of pourin
in, but the thing drawn out was expected to be know
edge, as tho the child had swallowed the world, an
methods must be applied to draw out of him what he ha
swallowed. Watch little children in the home or at pla
They are active, full of intensity, zeal, restlessness. Chil
study makes prominent the activities of the child an
tries to find the line along which these activities can direct themselves.

Child study brings out the significance of developmen
in education. We recognize particular characteristics whic
are prominent at different periods of growth, and whic
must be treated in different ways. Child study has don
much in bringing out the defining and leading characteristics of different epochs. Biologists talk about a culture medium; according to different media, they get different results in lower and even in higher forms of life; and thi
control of the nature of living things is as scientific a
the action of machinery. The skill of the horticulturis
in transforming grains and fruits is not guesswork o
haphazard, for they know the conditions necessary fo
such transformation. There is certainty that such ca
ultimately be done in human development when condition
for growth are better known.

QUESTIONS.

1. What is the principal fruit of child study? (Explain.)
2. In what respect has child study modified the pedagogical conception of education ?
3. Explain the importance of child study to the *teacher*. (What is accordingly the most fruitful plan of *child* study?)

History of Education.

The Beginnings of Secular Schools.

[Adapted for EDUCATIONAL FOUNDATIONS from Weimer's "Geschichte der Paedagogik."

I. From Charlemagne to the Crusades.

CHARLES THE GREAT was the first to prepare the way for an improvement in the educational system, and this he did with an iron hand. He longed to bring back the former glory of the Roman world-empire, and to make his beloved Aix-la-Chapelle a second Rome. Around his throne here he seasembld the greatest scholars of his day:—Alcuin, Paulus Diaconus, Petrus Lombardus—and with their help awakened to new life the Schola Palatina which had long before fallen into decay. His own children and the sons of the highest nobility attended the academy. The Latin language and literature were pursued with zeal. Alcuin's text-books, embracing the whole field of the seven liberal arts were soon considered the favorite school-books of the Middle Ages.

But the new Roman empire was to become a Christian one as well. Charles the Great wished his subjects not only to bear Christian names but also to acknowledge their faith and, as Christians, to pray to their Heavenly Father in accordance with Christ's teachings. For this reason he desired to have a system of national instruction introduced so that his people might at least know the confession of faith and count the Lord's Prayer among their spiritual possessions. But in spite of all his efforts and threats of punishment he never attained the fulfilment of this wish.

He was more successful, however, in his attempts to elevate the culture of the clergy. Again and again he urged upon them the necessity of studying sciences, assuring them that without a knowledge of these it would be impossible to solve the mysteries of the Holy Writ. The right way to educate honest clergymen had already been pointed out by Chrodegang (+ 766), bishop of Metz. He had had the divines belonging to his cathedral live together like canons of the church, and had entrusted to them the instruction of boys destined for the church. Following this precedent, Charles the Great established cathedral schools in all his important bishops' sees and here the boys were to learn at least the Psalms, their letters, singing, the church festivals, and grammar. After a while, however, these like the cloister schools, could not close their doors to lay students thirsting for learning, and so they were soon divided into the "inner" and "outer" schools.

Charles the Great finally lent his protection to the parochial schools, the establishment of which had been demanded by the church councils already mentioned. He left the direction of these in the hands of the priests so that singers and sacristans might be attracted to them to furnish the necessary divine service. How far the priests of his realm paid attention to this demand is uncertain, but it is not to be denied that after the emperor's death there were fewer and fewer parochial schools. After the first half of the ninth century, even the actual clerical schools could not remain at the height which they had attained during the great man's life. For Charles the Great had had a wonderful gift in knowing just how to imbue his subjects with the zealous desire he himself felt for learning. Thru the parochial schools he had created a dangerous enemy to the old cloister schools so that an honorable rivalry incited both to ever higher ideals.

In the ninth century the schools at Tours, Corbie, St. Amand, and Fontenelles in France, and those at Fulda, Corvey, St. Gallen, Reichenan, and others in Germany, became centers of high intellectual activity. But the invasion of France by the Normans and Magyars interrupted this advance in culture for a long time. It was not until the time of Otto the Great that renewed interest was felt for classical studies. Then, under the influence of the imperial court school, these studies were revived with a zeal comparable to that shown in the Carolingian period. But when under Otto III. and after only a short life this spirit was lost, the zeal for teaching and learning disappeared slowly but surely in the cloister and parochial schools as well.

The selection of subjects taught in the schools of the Middle Ages was determined by the aim of instruction. And this aim was to properly educate the clergy. Hence of the seven liberal arts only those were taught regularly, a knowledge of which was thought indispensable to the future priest. Rhetoric was entirely omitted in the cloister schools; in the parochial institutions it was occasionally taught. Logic was not regarded as important until the golden age of scholastic divinity in the second half of the Middle Ages. Arithmetic and astronomy were considered only so far as was necessary to calculate the church festivals. Geometry was given even less attention. The only arts taught with any degree of real thoroness were music and grammar, the latter term being used to designate the entire instruction in Latin. Hence, in addition to grammar itself, the term included meter, composition, and reading. The value of reading was regarded as depending first, on its use for instruction in grammar, and secondly on the moral import of the selection.

The choice of authors was made with these ends in view: Seneca was preferred to Cicero's philosophical writings; Orosius to Livy and Cæsar; Cato's precepts to Æsop's fables, and Virgil's epic and didactic poems to the writings of Horace and Ovid, since, from the standpoint of morality, the latter were more questionable.

The oldest school books on grammar were those of Donatus and Priscian; those by Bedas and Alcuin were added later. In the tenth century Patherius wrote a grammar called *Servadorsum* or *Sparadorsum.* At the beginning of the thirteenth century the most popular school book on grammar was "Doctrinale puerorum" by Alexander de Villa Dei. This contains in metrical form (rhymed hexameters) the most important points in etymology, syntax, meter, tropes, and figures, and the substance of the principal passages in the Old and New Testaments. Tho it contains many errors and is lacking in many points it was used for almost all Latin instruction up to the sixteenth century. Next to Alcuin's text-books, those of Martianus Capella, Boëthius, and Cassiodorus were the most important for instruction in other branches. *Cisio-Janus,* an almanac consisting of twenty-four verses, was frequently substituted for instruction in geography and mathematics.

The text-books were all in manuscript, and, owing to the scarcity of these, the pupils frequently had to learn everything by heart. This method of learning was difficult and slow and the hardship was increased by the rigid discipline then in vogue. What the teacher's or pupil's skill could not attain had to be accomplished by the rod, fasting, or confinement. Only a few hours were granted for rest or play. Absence of holidays was made up by numerous church festivals.

In the cloisters the teachers were under the *Magister principalis;* in the parochial schools their head was the *magister scholarum* or *Scholaster,* one of the leading divines of the foundation. Later he was intrusted with the superintendence of all schools in the diocese as well as with the appointment and dismissal of teachers. The extension of his duties made it necessary for the parochial schools to have a special leader (rector). Instruction in singing was given by the cantor, who also had a prominent position among the clergy of the foundation. The knowledge and general attainments expected of a teacher at this time are described by Rabanus Maurus in the third book of his *Institutio Clericorum.*

II. From the Time of the Crusades to the End of the Middle Ages.

The Crusades brought new life into the field of medieval education. They made Christian Europe acquainted with the high culture of the Arabs. The result was a mighty intellectual regeneration.

As early as the tenth century Gerbert, of Rheims, afterwards Pope Sylvester II., had made a study of Arabian arts and sciences while in Spain. But it was not until the Crusades that a more general interest began to be taken in the scientific acquirements of the Arabs. Then many Christian scholars entered the Moorish academies at Cordova, Salamanca, Seville, Toledo, and elsewhere, returning with a wealth of new treasures of knowledge. Information concerning mathematics, astronomy, geography, medicine, natural history, jurisprudence, and philosophy was extended and deepened to a degree undreamed of.

The cloistral and parochial schools of the day were unable to organize and incorporate the mass of new knowledge in their curricula. So learned men and youths, eager for study, formed independent associations for the purpose of spreading the new learning. A medical school was established at Salerno and law schools were organized at Bologna, Ravenna, and Padua. All of these were soon granted special privileges by both church and state. With the theological schools at Paris were affiliated departments of medicine and jurisprudence. In order to have a common foundation and one that might arrange for the preparation of students for the three faculties they became annexed to the cathedral school of Notre Dame. This was the origin of the first university of

Paris, an institution that was granted a corporative constitution by Innocent III. in 1215. The renown of this institution soon spread far beyond the confines of France. Scholars flocked there from every land so that it became necessary to divide teachers and pupils into four nations and to relegate them to separate houses (colleges, bursaries). Later, there was established, instead of this division according to nationality a separation into four faculties—of theology, law, medicine, and arts. The latter was merely the old cathedral school, whose subjects of study—the seven liberal arts—were retained in a somewhat changed and enlarged form. Only those who had completed this course and received the degree of Master of Arts were permitted to enter one of the three higher faculties in which he could advance to the doctor's degree. The school of arts continued in the role of a preparatory course to the three higher faculties until after the beginning of the eighteenth century.

A number of universities patterned after that of Paris were established in western Europe. After the fourteenth century many of these institutions were opened in Germany. In 1348 the first German university was established at Prague by Charles IV.; Vienna followed in 1365, Heidelberg in 1386, Cologne in 1388, Erfurt in 1392, Leipsic in 1409, Rostock in 1419, etc.

The great number of these institutions is sufficient evidence of how admirably they were adapted to fill the needs of the time. The church, realizing their importance to the spiritual life of the people, sought at once to make them serve its own purposes. The popes claimed the right to protect them and granted them rich benefices.

The theological faculty was given prominence on the ground that it was the most important. Almost all teachers were selected from among the divines and most of the students chose the theological courses. All scholarly activity was centered on the philosophical treatment of church doctrines. The powerful structure, scholasticism, was set up, and the leading scholars of the eleventh to the fourteenth century devoted all their intellectual activity to its development. An understanding of the technical terms and a knowledge of the historical events necessary for the purpose were derived from long years of study of Aristotle.

Thru the medium of Arabic translations of the latter Christian Europe now became acquainted also with the writings of Aristotle on physical and metaphysical subjects. They had hitherto known only his works on logic. Dialectics, which had been entirely neglected in the cloistral and parochial schools, attained a position of great importance among the seven liberal arts of the faculty of arts and Aristotle was regarded as a standard so far as secular history was concerned. Because of his writings physics, metaphysics, and ethics were introduced into the curriculum. In order that the course might still be regarded as consisting of seven studies—by this time a traditional custom—geometry, arithmetic, astronomy, and the theory of music were incorporated under the one head of mathematics.

With the rise of the universities the old cloistral and parochial schools lost more and more of their significance. Neither the efforts of the popes (especially Innocent III.) nor the vigorous attempts of the Franciscans and Dominicans—who felt it their duty to follow the steps of the Benedictines in the field of education—were able to restore these schools to their former position.

But the mendicant friars had all the greater success in the universities. Having devoted themselves most zealously to scholastic studies they succeeded in obtaining the majority of the professional chairs. St. Thomas Aquinas was the chief champion of the Dominicans while Duns Scotus performed a similar service for the Franciscans.

The death of *Scotus* was followed by the slow, but certain death of scholasticism. As Thomists and Scotists the orders set up rival schools, but their feuds showed little else than useless, dialectic sophistry. As a result, their language became more and more artificial, abstract, and obscure; classical Latin was supplanted by a barbarous "school Latin," afterwards justly ridiculed by the Humanists.

During the period of the Crusades the cloister and parochial schools labored under still another disadvantage. As a result of the Crusades both knights and burghers were in a flourishing condition and both demanded an education suited to the requirements of their rank. Since the instruction in the clerical schools was of a purely theological nature this did not suit the knights. Therefore they renounced all scholarly education, confining the instruction of their sons to drill in bodily exercise and the discipline of the court. The magistrates of cities, however, tried to "improve matters" by erecting "city schools."

The clergy, realizing the danger these new institutions threatened to its own school, opposed the innovation. The scholastic pleaded his old right to have entire control of the appointment of teachers and he objected to the establishment of schools for which his sanction had not been obtained and which it was intended to withdraw from his supervision. After a stubborn fight the cities, whether they wished to or not, were compelled to entrust the establishment and supervision of the schools desired to the care of the clergy.

Thus, after the twelfth century, the cities secured their own schools, tho these were usually erected near the parish churches. In order that these institutions might not interfere with the cloistral and parochial schools the scholastics insisted that they should give instruction only in writing and reading the mother tongue and that nothing beyond the rudiments of Latin should be taught.

Where there were no religious schools in the vicinity the "city schools" fared better. In these the students of Latin read at least beyond Cato and Æsop and studied Boethius' "De Consolatione Philosophiæ" and the works of other authors, particularly those of the Middle Ages. In most cases the schools were released from the supervision of the clergy toward the end of the medieval period and the curricula were considerably broadened.

There were in existence also unlicensed private schools, whose sole purpose was to give instruction in the German language to those intending to become artisans or merchants. During the Middle Ages these were taken over by many cities as teaching halls.

In the beginning most of the instructors in the "city schools" were of the priestly rank; later they were chosen from the School of Arts. They were looked upon as assistants to the schoolmaster or rector, who, in turn, usually had some connection with the magistrate. Their income consisted of a definite salary (money, food, etc.), and the school fees. As both rector and assistant could be dismissed after a year's trial a band of wandering professors was eventually the result. During the fourteenth century wandering scholars ("priests of Bacchus,") followed this example, and with their younger disciples (the A B C Guard") became a nuisance and a veritable plague of the time.

Questions.

1. In what respect did the Crusades tend to stimulate a revival of learning in Europe?
2. From whom did Christian Europe derive its lessons in Greek culture? (Explain.)
3. Give a brief outline of the origin of universities.
4. Where was the first European university established under Christian auspices? (Describe its organization.)
5. How did the church obtain control of public educational institutions in Europe?

(Continued on page 420.)

The Mystery of Rousseau.

By AMOS M. KELLOGG.

IT is conceded by all educators that Jean Jaques Rousseau exercised a prodigious influence on human thought and on the conception and administration of education. The second centennial of his birth, occurring a few years hence, finds the world still in the dark concerning the reason of the power he exerted. For example, whoever takes up the Declaration of Independence by the Thirteen Colonies sees, and will forever see in it, the mark of Rousseau's mind.

Rousseau was poorly educated, according to our idea of education. He received no bent, turn, or impression from any teacher; his schooling was of the slightest. He became a wanderer—a "tramp" we would say—spent a number of years in an extremely unworthy manner, and finally appeared in Paris. From such a life as his an ordinary man would emerge a degraded being, incompetent to understand the problems which beset humanity or to propose any better solution of them than had been given, but Rousseau was no ordinary man; he was a genius. He was not an unprincipled man as we use the term, but he certainly lacked foundation on Christian principles. Having seen considerable of the real world and recognizing the ills of the times he undertook to present his remedies for them, rose to the rank of the most original thinker of his day, and became a great contributing force towards the social and civil convulsion that occurred after his death.

The mystery is how a man, with a past like Rousseau's, could write so ably on subjects of which supposedly he knew nothing. Let us confine our attention to his writing on education, the story of Emile. There are three contributing influences visible in the make-up of Rousseau—his heredity, his companions, and nature. This last was a predominating influence, as all can see, and we are forced to conclude that nature is a force to be reckoned with in the formation of character.

Now we know that the general conclusion is that those who are in the presence of nature all the time, as the farmers, are not men of strong character; dwellers in cities speak of them contemptuously, as lacking intellectual force. Is not this conclusion erroneous? Rousseau presented the proposition that the best features in man's character were derived from an intimacy with nature and this he set forth in a story that fascinated the public, not only of his day, but left influences that are at work in this present time, as the making of a study of nature a part of the school course bears witness.

If we reflect upon it we shall note certain things.

1. Nearly all men in cities who have risen to eminence were born and brought up in the country. This is a fact that has been commented extensively upon by all writers on general education as contrasted with specific education.

2. The writers who affect character the most—the poets and novelists—depict nature. The popular writers to-day are those who feel the influences of the mountains, the seas, and the skies.

3. The Greek nations, the wonderful people of the past, it is agreed by historians, derived their peculiar character from the scenery among which they lived.

4. In some way the human race, living in caves thru the long ages of the Stone Age in a condition such as the Eskimo present to-day, rose to the civilization depicted by early history. R.'s teacher was nature; her influence gradually lifted him from his low estate. We agree to this, but suppose this influence is not still to be operative. Rousseau, however, looking into his own heart, felt that what he was he had derived from the influence *of the scenery* in which he had moved.

The mystery of Rousseau is like the mystery of Shakespeare. He left Stratford under a cloud, with little schooling, unformed in character, but somehow wonderfully influenced by nature, as all his writings show. Somehow he was able to read the book of nature opened before him with the rising of the sun and with the rising, too, of the stars. It was Rousseau that felt this was an educative influence of a positive, extensive, and beneficent character. He undertook to tell mankind of his discovery in Emile and succeeded in arresting its attention, but he has not made it plain how the world about us so powerfully affects us. All who read the book are disappointed. "Still," we say, "nature does it, but just how we cannot say."

It is admitted on all sides, however, that Rousseau got hold of a great truth, and in these present days the study of nature is becoming a part of the school course. In future years it will change the grounds about the rural school especially. Poorly as Emile is portrayed, enough of a glimpse is obtained to set people to wishing that the good there is in nature shall be enjoyed by their children. Rousseau knew practically nothing of bringing up children; he was conscious of possessing a certain comprehension of himself and the surrounding world; he looked into his own heart and wrote; thus Emile was produced.

The question will force itself on the practical educator: Is there the positive influence in us from nature that is declared by writers? Is it an illusion that causes Bryant to declare that she "speaks a various language"?

But it is essential, as Bryant says, that we be in the love of nature if we would hold communion with her. Undoubtedly Rousseau was one who deeply loved the lake, mountain, valley, and sky. Byron went over the same path on the shore of Lake Leman and testifies to the fidelity with which he painted the scenery. A partial solution of the mystery of Rousseau is thus reached

Questions.

1. Who was Rousseau?
2. At what period did he live? (June 28, 1712.)
3. Give some account of him.
4. What statement in our Declaration of Independence was drawn from his writings? (That all men are created free and equal.)
5. Was he an "educated" man?
6. Why may he be termed a "tramp"?
7. What would be the effect on the ordinary man of living as he did?
8. What conclusions does the effect of Rousseau's early life warrant?
9. What problems did he set himself to solve?
10. What did the public think of him?
11. What is the mystery?
12. What three influences bear upon Rousseau's make-up? Which seems the strongest?
13. What is the popular conclusion concerning the farmer? Is this correct? Reasons?
14. Give reasons for the growing belief that a study of nature is education.
15. Explain how the human race rose to civilization.
16. Where did Rousseau get his information about the influence of nature?
17. How is he like Shakespeare?
18. What is the purpose of Émile?

"My principal object in teaching my pupil to feel and love the beautiful in all its forms, is to fix his affections and his tastes, to prevent his natural appetites from degenerating, and himself from some day seeking in riches the means of happiness which he ought to find nearer home."

"The great secret of education is to make bodily and mental exercises always serve as recreations from each other."—ROUSSEAU in *Émile.*

Educational Classics.

Rousseau's Émile or Concerning Education.

Extracts from Book Second.

OUR pedantic mania for instructing is constantly leading us into teaching children things they can far better learn for themselves, and thereby we lose sight of what we alone can teach them. Is there anything more absurd than the pains we take in teaching them to walk? As if we had ever seen one, who, thru his nurse's negligence, did not know how to walk when grown! On the contrary, how many people do we see moving awkwardly all their lives because they have been badly taught how to walk!

Love childhood; encourage its sports, its pleasures, its lovable instincts. Why should we rob the little ones of the enjoyment of their youth, a time so brief, so transient, of a boon so precious? Why will you fill these fleeting years with bitterness and sorrow? As soon as they can appreciate the delights of existence let them enjoy it.

You answer, "It is the time to correct the evil tendencies of the human heart. In childhood, when sufferings are less keenly felt, they ought to be multiplied, so that fewer of them will have to be encountered during the age of reason. But who has told you that it is your province to make this arrangement, and that all these fine instructions, with which you burden the tender mind of a child, will not one day be more pernicious than useful to him? Who assures you that you spare him anything when you deal him afflictions with so lavish a hand? Why do you cause him more unhappiness than he can bear, when you are not sure that the future will compensate him for these present evils? And how can *you* prove that the evil tendencies of which you pretend to cure him will not arise from your mistaken care rather than from nature itself! Unhappy foresight which renders a creature actually miserable in the hope, well or ill-founded, of one day making him happy! If these vulgar reasoners confound license with liberty, and mistake a spoiled child for a child who is made happy, let us teach them to distinguish the two.

Bear this in mind: humanity has its place in the general order of things; childhood has its place in the order of human life. Manhood must be looked for in the individual man, and childhood in the individual child. To assign to each his place, and to establish him in it—to direct human passions as human nature will permit—is all we can do for his welfare. The rest depends on influences beyond our control.

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But we must take heed of those wishes they cannot themselves accomplish, but must fulfil by the hand of another. Care should be taken to distinguish the real wants, the wants of nature, from those which arise from fancy or from the redundant life of childhood.

The surest way to make a child unhappy is to accustom him to obtain everything he wants to have. For, since his wishes multiply in proportion to the ease with which they are gratified, your inability to fulfil them will sooner or later oblige you to refuse in spite of yourself, and this unwonted refusal will pain him more than withholding from him what he demands. At first he will want the cane you hold; soon he will want your watch; afterward he will want the bird he sees flying, or the star he sees shining. He will want everything he sees, and without being God himself how can you content him?

The child who has only to wish in order to obtain his wish thinks himself the owner of the universe. He regards all men as his slaves, and when at last he must be denied something, he, believing everything possible when he commands it, takes refusal for an act of rebellion. At his age, incapable of reasoning, all reasons given seem to him only pretexts. He sees ill-will in everything; the feeling of imagined injustice embitters his temper; he begins to hate everybody, and without ever being thankful for kindness, is angry at any opposition whatever.

Who supposes that a child thus ruled by anger, a prey to furious passions, can ever be happy? He happy? He is a tyrant; that is, the vilest of slaves, and at the same time the most miserable of beings. I have seen children thus reared who wanted those about them to push the house down, to give them the weathercock they saw on a steeple, to stop the march of a regiment so that they could enjoy the drum-beat a little longer; and as soon as obedience to these demands was delayed they rent the air with their screams and would listen to no one. In vain everybody tried eagerly to gratify them. The ease with which they found their wishes obeyed stimulated them to desire more, and to be stubborn about impossibilities. Everywhere they found only contradictions, impediments, suffering, and sorrow. Always complaining, always refractory, always angry, they spent the time in crying and fretting; were these creatures happy? Authority and weakness conjoined produce only madness and wretchedness. One of two spoiled children beats the table, and the other has the sea lashed.* They will have much to beat and to lash before they are satisfied with life.

Is there a creature on earth more helpless, more unhappy, more at the mercy of everything around him, more in need of compassion, of care, of protection, than a child? Does it not seem as if his sweet face and touching aspect were intended to interest everyone who comes near him and to urge them to assist his weakness? What then is more outrageous, more contrary to the fitness of things, than to see an imperious and headstrong child ordering about those around him, impudently taking the tone of a master toward those who, to destroy him, need only leave him to himself!

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* Xerxes, king of Persia, had built an immense bridge of boats over the Hellespont to transport his army from Asia into Europe. A storm destroyed the bridge. The all-powerful monarch, furious at the insubordination of the elements, ordered chains to be cast into the sea, and had the rebellious waves beaten with rods.

On the other hand, who does not see that since the weakness of infancy fetters children in so many ways, we are barbarous if we add to this natural dependence a bondage to our own caprices by taking from them the limited freedom they have, a freedom they are so little able to misuse, and from the loss of which we and they have so little to gain? As nothing is more ridiculous than a haughty child, so nothing is more pitiable than a cowardly child.

Reasoning Should not Begin too Soon.

Locke's great maxim was that we ought to reason with children, and just now this maxim is much in fashion. I think, however, that its success does not warrant its reputation, and I find nothing more stupid than children who have been so much reasoned with. Reason, apparently a compound of all other faculties, the one latest developed, and with most difficulty, is the one proposed as agent in unfolding the faculties earliest used. The noblest work of education is to make a reasoning man, and we expect to train a young child by making him reason! This is beginning at the end; this is making an instrument of a result. If children understood how to reason they would not need to be educated.

Nature intends that children shall be children before they are men. If we insist on reversing this order we shall have fruit early indeed, but unripe and tasteless, and *liable to early* decay. Childhood has its own methods of seeing, thinking, and feeling. Nothing shows less sense than to try to substitute our own methods for these. I would rather require a child ten years old to be five feet tall than to be judicious. Indeed, what use would he have at that age for the power to reason? It is a check upon physical strength and the child needs none.

Well-Regulated Liberty.

Treat your pupil as his age demands. Do not let him conclude that you claim authority over him. Let him know only that he is weak and you are strong; that from his condition and years he is necessarily at your mercy. Let him know this—learn it and feel it. Let him early know that upon his haughty neck is the stern yoke nature imposes upon man, the heavy yoke of necessity, under which every finite being must toil. Let him discover this necessity in the nature of things; never in human caprice. Let the rein that holds him back be power, not authority.

Do not forbid, but prevent, his doing what he ought not; and in thus preventing him use no explanations, give no reasons. What you grant him, grant at the first asking without any urging, any entreaty from him, and above all without conditions. Consent with pleasure and refuse unwillingly, but let every refusal be irrevocable. Let no importunity move you. Let the "No" once uttered be a wall of brass against which the child will have to exhaust his strength only five or six times before he ceases trying to overturn it. In this way you will make him patient, even-tempered, resigned, gentle, even when he has not what he wants. For it is in our nature to endure patiently the decrees of fate, but not the ill-will of others.

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It marvelous that in undertaking to educate a child *no other* means of guiding him should have been devised than emulation, jealousy, envy, vanity, greed, vile fear,—all of them passions most dangerous, readiest to ferment, fittest to corrupt a soul, even before the body is full-grown. "Such is man." Yes; such is the man you have made.

All means have been tried save one, and that the very one which insures success, namely, well-regulated freedom.

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May I venture to state here the greatest, the most important, the most useful rule in all education? It is, not to gain time, but to lose it. Reader, pardon the paradox. Whatever you may say, I prefer paradoxes to prejudices.

The earliest education ought to be purely negative. It consists not in teaching truth or virtue, but in shielding the heart from vice and the mind from error.

Be in no haste to do good for the sake of preventing evil. Let childhood have its full growth. If a lesson must be given, avoid it to-day, if you can without danger delay it until to-morrow.

The peculiar bent of the child's mind ought to be well understood if we would know what moral government is best adapted to him. Each has his own cast of mind, in accordance with which he must be directed; and if we would succeed, he must be ruled according to this natural bent and no other. Be judicious; watch nature long, and observe your pupil carefully before you teach him. Leave the germ of his character freedom to disclose itself. Repress it as little as possible, so that you may the better see all there is of it.

The wise physician does not give directions at first sight of his patient, but studies the sick man's temperament before prescribing. He begins late with his treatment, but cures the man; the over-hasty physician kills *him.*

Be plain, discreet, reticent, you who are zealous teachers. Be in no haste to act, except to prevent others from acting.

Again and again I say, postpone even a good lesson if you can, for fear of conveying a bad one. On this earth, meant by nature to be man's first paradise, beware lest you act the tempter by giving to innocence the knowledge of good and evil. Since you cannot prevent the child's learning from outside examples, restrict your care to the task of permitting good examples to impress his mind.

The only moral lesson suited to childhood and the most important, one at any age is, never to injure any one. Even the principle of doing good, if not subordinated to this, is dangerous, false, and contradictory. For who does not do good? Everybody does, even a wicked man who makes one happy at the expense of making a hundred miserable; and thence arise our calamities:

* * * * *

Respect children and be in no haste to judge their actions, good or evil. Let the exceptional cases show themselves such for some time before you adopt special methods of dealing with them. Let nature be long at work before you attempt to supplant her, lest you thwart her work.

What would you think of a man who, in order to use his whole life to the best advantage, would not sleep? Childhood is the slumber of reason.

Apparent quickness in learning is the ruin of children. We do not consider that this very quickness proves that they are learning nothing. Their smooth and polished brain reflects like a mirror the objects presented to it, but nothing abides there, nothing penetrates it. The child retains the words; the ideas are reflected; they who hear understand them, but he himself does not *understand* them at all.

* * * * *

Pedagogs, who make such an imposing display of what they teach, are paid to talk in another strain than mine, but their conduct shows that they think as I do. For, after all, what do they teach their pupils? Words, words, words. Among all their boasted subjects none are selected because they are useful; such would be the sciences of things, in which these professors are unskilful. But they prefer sciences we seem to know when we have command of their nomenclature, geography, for instance.

In any study, words that represent things are nothing without the ideas of the things they represent. We, however, limit children to these signs, without ever being able to make them understand the things represented. We think we are teaching a child the description of the earth, when he is merely learning maps. We teach him the names of cities, countries, rivers; he has no idea that they exist anywhere but on the map we use in pointing them out to him.

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Much attention is paid to finding out the best methods of teaching children to read. We invent printing-offices and charts; we turn a child's room into a printer's establishment. A better thing than all these, a thing no one seems to think of, is the desire to learn. Give a child this desire and any device will serve you.

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Our senses are the first powers perfected in us. They are the first that should be cultivated and the ones most neglected.

To exercise the senses is not merely to use them, but to learn how to judge correctly by means of them. Measure, count, weigh, and compare. Use no strength till after you have calculated the resistance it will meet. Be careful to estimate the effect before you use the means. Interest the child in never making any useless or inadequate trials of strength. If you accustom him to forecast the effect of every movement, and to correct his errors by experience, is it not certain that the more he does the better his judgment will be?

As the sense of sight is the one least easily separated from the judgments of the mind, we need a great deal of time for learning how to see. We must for a long time compare sight with touch, if we would accustom our eye to report forms and distances accurately.

When the child is calculating the height of a house, his tutor may serve as a unit of measure. In estimating the altitude of a steeple, he may compare it with that of the neighboring houses. If he wants to know how many miles there are in a given journey, let him reckon the number of hours spent in making it on foot. By all means do none of this work for him; let him do it himself.

Drawing.

* * * * *

All children being natural imitators, try to draw. I would have my pupil cultivate this art, not exactly for the sake of the art itself, but to render the eye true and the hand flexible. In general it matters little whether he understands this or that exercise, provided he acquires the mental insight, and the manual skill furnished by the exercise. I should take care, therefore, not to give him a drawing master, who would give him only copies to imitate, and would make him draw from drawings only. He shall have no teacher but nature, no models but real things. He shall have before his eyes the originals and not the paper which represents them. He shall draw a house from a real house, a tree from a tree, a human figure from the man himself. In this way he will accustom himself to observe bodies and their appearances, and not mistake for accurate imitations those that are false and conventional. I should even object to his drawing anything from memory, until by frequent observations the exact forms of the objects had clearly imprinted themselves on his imagination, lest, substituting odd and fantastic shapes for the real things, he might lose the knowledge of proportion and a taste for the beauties of nature. I know very well that he will go on daubing for a long time without making anything worth noticing, and will be long in mastering elegance of outline, and in acquiring the deft stroke of a skilled draughtsman. He may never learn to discern picturesque effects, or draw with superior skill. On the other hand, he will have a more correct eye, a truer hand, a knowledge of the real relations of size and shape in animals, plants, and natural bodies, and practical experience of the illusions of perspective. This is precisely what I intend; not so much that he shall imitate objects as that he shall know them. I would rather have him show me an acanthus than a finished drawing of the foliation of a capital.

Rousseau is not what I call a strong man. A morbid, excitable, spasmodic man; at best, intense rather than strong. . . . . . He has not depth or width, not calm force for difficulty; the first characteristic of true greatness. A fundamental mistake to call vehemence and rigidity strength! A man is not strong who takes convulsion-fits; tho six men cannot hold him then. He that can walk under the heaviest weight, without staggering, he is the strong man.

. . . . . Strangely thru all that defacement, degredation, and almost madness, there is in the inmost heart of poor Rousseau a spark of real heavenly fire.

. . . . . He could be cooped into garrets, laughed at as a maniac, left to starve like a wild beast in his cage; —but he could not be hindered from setting the world on fire. The French revolution found its evangelist in Rousseau. —Thomas Carlyle.

Questions upon March "Foundations."

1. What are some of the dangers of over-illustration in teaching?
(Explain) - - - - - - [p. 317.]

* * * * *

2. What is meant by attention?
(Give the definition of Professor James) - [p. 319.]

3. How may the various forms of attention be classified? - - - - - - - [p. 319.]

4. What is meant by "passive" attention?
(How does it originate? What value may the teacher attach to it?) - - - - - - - [p. 319.]

5. How does "voluntary" attention differ from "passive" attention? - - - - - - - [p. 320.]

6. What is meant by "secondary passive" attention, and wherein does it differ from "passive" and "voluntary" attention?
(Its importance?) - - - - - - - [p. 320.]

7. How may the teacher incite the child to "secondary passive" or spontaneous attention? - [p. 321]

8. What kind of attention is of most value as a school virtue?
(Why?) - - - - - - - - [p. 321.]

9. What are the fundamental conditions for the stimulation of a child's interest? - - - [p. 321.]

10. What kind of teaching is most efficient for securing and retaining attention and developing a healthy, active, continuous interest? - - [pp. 322–325.]

11. What are the principal physical conditions of attention? - - - - - - - [p. 325.]

. . . . . .

11. How does Rousseau define education?
- - - - - - - - [pp. 326–328.]

12. Rousseau speaks of three different educations; what are they, and does each affect the child?
- - - - - - - [pp. 326–7.]

13. Whom does Rousseau consider the best educated? - - - - - - - - - [p. 328.]

14. Give an outline of Rousseau's views concerning the early education of children. - [pp. 328–331.]

15. What maxims does Rousseau lay down for the guidance of those who undertake to educate children? - - - - - - - - [pp. 331–2.]

16. What suggestions does the *Émile* give concerning teaching language to children? - - - [p. 332.]

17-30. Discuss the following extracts from the *Émile:*

"To form this rare creature—the natural man—what have we to do? Much, no doubt, but chiefly to prevent anything from being done."

"In the natural order of things, all men being equal, the vocation common to all is manhood; and whoever is well trained for that, cannot fulfil badly any vocation connected with it."

"Whether my pupil be destined for the army, the church, or the bar, matters little to me. Before he can think of adopting the vocation of his parents, nature calls upon him to be a man. *To live* is the trade I wish to teach him."

"Our real study is that of human life."

"He among us who best knows how to bear the good and evil fortunes of this life is, in my opinion, the best educated."

"True education consists less in precept than in practice."

"It is less important to keep the child from dying than it is to *teach him how to live.* To live is not merely to breathe, it is to act. It is to make use of our organs, of our senses, of our faculties, of all the powers which make us sensible of our existence."

"Provided we do not exceed the measure of the child's strength, it is better to employ it than to hoard it."

"Give children practice, then, in the trials they will one day have to endure. Inure their bodies to the inclemencies of the seasons, of climates, of elements; to hunger, thirst, fatigue; plunge them into the water of the Styx."

"A child becomes more precious as he advances in age."

"The only habit a child should be allowed to form is to contract no habits whatever."

"There is no moral character in our actions, altho there sometimes is in our feeling toward those actions of others which relate to us."

"Allow children more personal freedom and govern less by authority."

"It is unbearable pedantry, and a most useless labor to attempt correcting in children every little fault against usage."

Questions on History of Education.

(Continued from page 403.)

6. What is meant by scholasticism? (What great philosopher's writings became the principal texts of the medieval schools and universities?)
7. What were the principal [seven] studies of the medival college?
8. Upon whom did the medieval schools confer the degree of Master of Arts? The doctor's degree? What were the requirements for admission to the university?
9. Describe the origin of the city schools. Why were they founded, and how did the church secure virtual control of them?
10. What was the status of the school teachers in the *beginning of* city school organization.

Study of Art and Great Paintings.

A Short History of Art.

Adapted from K. GOEPEL'S history, by FRANCIS C. TURNER.

I. Indian Art.

IN India we find no buildings old as the Parthenon or the Temple of Jupiter or the Capitol. The earliest remains belong to considerably later than the beginning of the Christian era.

The people of India, as we now know it, has been formed by successive immigrations from the northwest. As early as we can go back, the Tamul race, which now forms the substratum of the people of southern India, inhabited the peninsula. Of their earlier history, or even of their origin, we know nothing, no monuments remain to tell us to what degree of civilization they had arrived. The other race came from the west, in times far remote, and gradually spread thru the whole valleys of the Indus and Ganges. This race has been traced by its language and traditions to the same stock as the Persian, the Greek, the Latin, and the Teuton, and like the latter their religion gave no encouragement to art. When first we meet with the German race, we find that they build no temples, and erect no tombs ; for, says Tacitus, they think that to confine the gods within walls, or to represent them in any human shape, is unworthy of the greatness of the heavenly beings ; . . . they have no care for tombs, they burn the bodies of their greatest men with special woods, they burn their arms and horses with them, and despise the burdensome honor of monuments.

The same views we find in the Vedas, the ancient hymns of the Hindoo race ; they had no temples and no images of the gods. Each man prayed by himself to his god in the immediate presence of the deity.

It was only after the introduction of the new religion of Buddha that architecture began. Whether the religion began with Sinha the present Buddha, who attained to Buddhahood in 588 B. C., or whether there is any real foundation for the mythical accounts of the previous Buddhas, is a question which cannot be answered with certainty. Nor is it known whether the religion met at once with general acceptance. Chandragupta, the contemporary of Alexander, still adhered to the old Brahminical faith; Asoka, his grandson, adopted that of Buddha; with him the art history of India begins. The remains of Buddhist architecture which come down to us from the twelve centuries during which the religion was almost universal in India, consist chiefly of three classes,—topes, temples, and monasteries. Of the first, single columns rising to height of about forty feet, and surmounted by a figure of a lynx seated on the capital, are found in various parts of India. All, including the capital, are formed out of a single block; all are inscribed with edicts expounding the laws and creed of the religion. They must have stood originally in front of sacred buildings; but none at present remain. The other and more common form of tope is that shown in our illustration of the Tope of Sanchi. It consists of

THE TOPE OF SANCHI.

an almost hemispherical dome with a flat platform at the top. The dome rests on a base which leaves a path six feet wide around it. The center of the mound is quite solid. A fence of stone surrounds the whole, and is entered by four gateways, consisting of square stone sculptured posts with elephant capitals crossed by three wavy lintels one above the other. Many of these contain relic chambers, tho it is probable that the relics were generally kept, not within the mound, but in the square shrine or Tee which stood on the top of it, no example of which however remains. These relics, which are traditionally accounted for by the distribution of the remains of Buddha, have ever been objects of worship. His doctrine taught " there are no gods; every man is capable of assimilating himself to the one god, the source of his being, by penance and the suppression of earthly desires, and of becoming a saint, nay, a god upon earth." It is supposed that topes were invariably surmounted by the umbrella, a universal symbol of royalty in the East. We see it in the Chinese pagoda; and when in the rock-cut temple this came to be imitated in stone, several umbrellas one above the other passed gradually into a more architectural ornament forming a spire.

Of the Chaityas (temples) and Viharas (monasteries) no built examples exist, we therefore know nothing of their external appearance; but their internal architecture and the façade, we can study in detail in the rock-cut temples which are so numerous and so perfect. Within they are in form not unlike an early Christian church, consisting of a nave and side aisles, with a terminal apse. In the gorge of Ajunta we find a number of these. Above the door is a horseshoe window between two columned galleries. In entering thru the pointed arch of the door two figures on either side attract our attention; they have their legs folded beneath them, and wear an expression of gentle tranquillity and contemplation. Upon the walls are reliefs of a similar character. The second door, which is similar to the first, admits us into the nave. The columns are slender and have elephant capitals. At the end of the nave is a gigantic half-nude seated figure of Buddha. A small tope (sometimes called Dagope, which is probably another form of the word pagoda) supports the reliquary. The dagope has the form of a bubble, to which Buddha compared the transitory nature of earthly life. At the back we find a smaller sanctuary not vaulted, and on either side the apartments of the priests and hermits.

Returning into the temple itself we see on the walls sketches in color of scenes taken from the life of Buddha, among them a procession in his honor. In the midst of the human figures is a white elephant; the drawing is good and unconventional, but without expression.

Each of the twenty-seven temples and monasteries in this valley served the same purpose, and is similar in its main design, but with endless varieties of the piers and columns, as the style developed. Already in the monoliths of Asoka we find that the capitals take the form of the lotus-flower, and the necking below shows the honeysuckle ornamentation and leaf.

When the Buddhist priesthood and religious orders became so numerous, that it began to perish from internal decay, Jainism arose; a faith which repudiated the Buddha Sakya Sinha, and claimed to go back to an earlier form of the religion, one of whose chief saints was Mahavira, acknowledged by the orthodox to have been the teacher and friend of Buddha. But, in competition with the growing claims of Hindooism, Jainism sunk into superstition and idolatry. The characteristic of the Jaina architecture is the dome, a dome not built like the Roman domes, of voussoirs or radiating wedges, but of horizontal layers of masonry, like the treasury of *Atreus* at Mycenæ, and many arches from that to Christian times. This method of building was only available to cover small spaces; but had the advantage over the Roman of escaping the outward thrust which is always likely to destroy arch or dome built on the Roman method. The ornament of these domes ran therefore in concentric horizontal circles, instead of in vertical radiations, and it was possible to employ pendants without the risks and difficulties with which our Tudor architects employed them (see Henry VII.'s chapel). For beauty of arrangement and detail no building in India surpasses the Jaina temple of Sadree.

Let us now go south to the Hindoo temples, the chief of which are south of the line joining Madras and Mangalore. This country, within the Ghâts, seems always to have been inhabited by people of almost pure Tamul race. It was the scene of the most prolonged struggle between the Buddhist and Hindoo religions, and so completely was the former extirpated in the end that there is no Buddhist monument known south of the Kistna.

With the transition from Buddhism to Brahminism the development of sculpture really begins; the only sculpture under Buddhism consisted of the cross-legged, calm, expressionless figures of Buddha; while the monstrous Brahminical gods gave opportunity for imagination and vigorous work.

The two opposing sects into which Brahminism was divided do not differ in their architecture; we can only distinguish whether a temple belongs to the worshippers of Vishnu or of Siva by looking at the attributes of the gods. There is a striking similarity between these figures and those we see in Assyrian sculpture; the eagle-headed Vahana seems identical with the familiar figure of the Nineveh sculptures, Ormazd; Dagon, with the fish Avatar of Vishnu; the man-lion appears in both; Bali shows his western origin by his name; and Maha Assura, the bull-headed *man*, is clearly to be identified with the man-headed bull of Assyria; the ninth Avatar of Vishn is always Buddha, and thus we see the connection of th Jains and Vishnaves, who by the fourteenth centur differed hardly appreciably. The temple Vimana wa always square, surmounted by a pyramidal roof of sever stories. The perpendicular part is generally a cub always of stone, ornamented with pilasters, niches, et The roof is generally of brick covered with stucco. I some temples, as at Tanjore, it is fourteen stories hig A square porch (Mantapa) covers the entrance. Th rectangular enclosure in which the temple is placed i entered by gates over which are gopuras or gat pyramids. These enclosures and gopuras have ofte been multiplied and increased so as to entirely hide th Vimana itself. Between the various enclosures ar found choultries or pillared colonnades, which are som times used for the performances of the dancing girls a tached to the temple; but chiefly for the celebration o the mystic union of the gods.

One of the most interesting monuments of Hindo architecture is the rock-cut temple of Ellora. Unlik the Buddhist chaityas, it is not merely a cave scoope in the rock, but it is a complete temple from which th rock has been cut away outside as well as in. The cen tral Vimana, a great part supported on elephants, a de tached porch connected by bridges with the Vimana, an other gateway, two detached pillars and two life-size elephants being left free. Around the court is a peri stylar cloister with cells, and other buildings which give i astonishing completeness and beauty.

In the charming snow-bound valleys of Cashmere w find graceful temples, some old, some modern, withi which the primitive Brahminical worship is typified i the union of the three heads of Brahma, Vishnu, an Siva, on one body. Here there are sloping roof *broken by* dormer windows, like those of mediæva

European buildings. The roofs of the porches and door ways have the same sloping lines as the main roofs. The shafts of the columns have a curious likeness to Greek Doric forms. The typical example of Cashmere architecture is the Temple of Marttand, five miles east of Islamabad, the ancient capital of the valley. Its beauty is due, in a great measure, to its situation. "It stands," as Fergusson writes, "on an elevated plateau, from which a most extensive view is obtained over a great part of the valley. No tree or house interferes with its solitary grandeur; and its ruins—shaken down apparently

by an earthquake—lie scattered as they fell, unobscure by vegetation."

Its plan is interesting, from its resemblance to th plan of the Temple of the Jews. The dimensions of th court that encloses the cella are two hundred and twent feet by a hundred and forty-two feet. The interior o this court was probably filled with water, and stepping stones led from the entrance gate to the cella. Th reason for erecting temples in water was, that the might be more directly under "the protection of th Nagas, or human-bodied and snake-tailed gods, wh were jealously worshiped for ages thruout Cashmere.'

The Mahometan invaders of India adopted the Jain style of architecture modified in accordance with Sara cenic tendencies. The principal characteristic of thei Indian architecture is the prevalence of tombs; th mosques are an adjunct to the tomb, not *vice versa* as in Egypt and Persia. The finest of the tombs i the Tajè Mehal at Agra, the *chef d'œuvre* of Sha Jehan's reign (1628–1658 A. D.). The Tajè, or tom with its dome and its minarets, stands on a platform in court eight hundred and eighty feet square. Beyon this there is an outer court, the same width and half th depth. It has three gateways of its own, and in th middle of the inner wall is the far-famed gateway of th garden court. The plan of the mausoleum is a square hundred and eighty-six feet, with the corners cut off. Th dome is fifty-eight feet in diameter, and eighty feet high The tombs are under the dome. The bodies, in accordanc with the Indian practice, are interred in vaults directl below the apparent tomb. The whole building is o white marble; light is admitted thru double screens o white marble trellis-work, which, in the brilliant India climate, temper the light very agreeably. The ornamentation of the building consists of precious stones inlaid in the walls.

Teachers' Examinations.

New York State Uniform Examinations for Commissioner's Certificate.

(January 8 and 9, 1903.)

GRAMMAR.

1 When simplicity of character and the sovereignty of
2 ideas are broken up by the prevalence of secondary de-
3 sires, the desire of riches, of pleasure, of power, and of
4 praise,—and duplicity and falsehood take place of simplic-
5 ity and truth the power over nature as an interpreter of
6 the will is in a degree lost; new imagery ceases to be cre-
7 ated and old words are perverted to stand for things which
8 are not; a paper currency is employed when there is no
9 bullion in the vaults. In due time the fraud is manifest
10 and words lose all power to stimulate the understanding
11 or the affections. Hundreds of writers may be found in
12 every long-civilized nation, who, for a short time, believe
13 and make others believe that they see and utter truths,
14 who do not themselves clothe one thought in its natural
15 garment, but who feed unconsciously on the language
16 created by the primary writers of the country, those,
17 namely, who hold primarily on nature.

—RALPH WALDO EMERSON.

1. Clauses are principal or subordinate. Subordinate clauses *a*. subject clauses; *b*. objective clauses; *c*. adjective clauses; *d*. adverbial clauses.

2. In naming a clause, include only its unmodified subject and unmodified predicate.

3. In giving modifiers, if words, name the parts of speech to which they belong. In like manner state the character of modifying phrases and clauses, as adjective, adverbial, etc.

4. An object of a transitive verb is classed as a modifier of that verb.

5. In parsing a noun or pronoun, observe the following order: Class, person, number, gender, case. Give the reason for case. In parsing a relative pronoun, state the agreement with its antecedent.

6. In giving the syntax of a noun or pronoun, give only the case and the reason for it.

7. Verbs are divided into two classes, viz., transitive and intransitive. A transitive verb may be used in the active or the passive voice.

8. In parsing a verb, observe the following order: Principal parts, regular or irregular, transitive or intransitive, voice, mode, tense, person, number, agreement; give the special use of an infinitive or participle after tense.

The first eight questions refer to the above selection.

1. Classify the following clauses: *a. Duplicity and falsehood take* (line 4); *b. Power is lost* (lines 5 and 6); *c. Which are* (lines 7 and 8); *d. There is bullion* (lines 8 and 9); *e. They see and utter* (line 13).

2. Give all the modifiers *a.* of *writers* (line 11); b. of *do clothe* (line 14).

3. Classify and give syntax of *a. to stand* (line 7); *b. t stimulate* (line 10).

4. Parse *a. every* (line 12); *b. created* (line 16).

5. Select, and classify as to part of speech, four differen words which connect clauses.

6. Select five transitive verbs, two in the active voice an three in the passive.

7. Select three personal pronouns and one adjective pronoun (pronominal adjective).

8. Write a sentence whose subject and predicate have eac two modifiers, differing in form. Classify each modifier.

9. Illustrate in a sentence a clause used as *a.* an attribut complement; *b.* object of a preposition.

10. *a.* How is the part of speech of any word in a sentenc determined? *b.* Show, by means of sentences, that a wor may be used as two or more parts of speech.

ANSWERS.

1. *a.* Adverbial, *b.* principal, *c.* adjective, *d.* adverbial, *e* objective.

2. *a. Hundreds of, who believe,* and *make, who do clothe who feed. b. Not, in garment, thought.*

3. *a.* Infinitive phrase, adverbial modifier of *perverted b.* Infinitive phrase, adjective modifier of *power.*

4. *a.* Indefinite numeral adjective, modifies *nation. b* Regular transitive verb, passive voice, participle, pas tense, used as adjective modifier of *language.*

5. *When,* (line 1) conjunctive adverb; *and* (line 3) conjunction; *which* (line 7) relative pronoun; *but* (line 15) conjunction; *who* (line 12) relative pronoun, etc.

6. *Lose* and *stimulate* (line 10) are in the active voice *are broken, may be found,* and *is employed* are in th passive voice.

7. *They, its, themselves,* personal pronouns; *those* adjective pronoun.

8. *Each* boatman, *bending* to his oar,
With measured sweep the *burden* bore,
Each, adjective; *bending,* participle; *with tread,* prepositional phrase; *burden,* object complement of *bore.*

9. *a.* Our belief is, *that all men are created equal. b.* What is meant by "Thy spoken word is master of the"?

10. *a.* By its use in the sentence. *b.* There was an explosion in the *mine* (noun). These books are not *mine* (adjective). They *mine* quantities of coal in Pennsylvania (verb). *That "that"* that that Albany man used was tautological.

AMERICAN HISTORY.

1 *a.* Where is Roanoke island? *b.* Give an account of the attempts of the English to establish a colony on this island.

2 *a.* What was the strongest Indian federation in America during the colonial period? *b.* Account for its unfriendly attitude toward the French.

3 *a.* What two colonies were separated by "Mason and Dixon's Line"? *b.* What has made this line famous in American history?

4. Among the principal events of 1775 were the battle of Bunker Hill, the capture of Ticonderoga, and the invasion of Canada. *a.* Give the names of the American commanders in connection with each of these events. *b.* Trace the routes taken by the Americans in this invasion of Canada.

5. Name five places in the state of New York where important battles were fought during the Revolution and give the location of each.

6 *a.* About what time were the Articles of Confederation adopted by the colonies as a form of government? *b.* Why did these articles fail to provide a strong and efficient government?

7. Name the most famous naval commander of the civil war and give a brief account of two engagements in which he won distinction.

8 *a.* What was known as the Oregon country? *b.* Give two reasons advanced by the United States in support of its claim to this country.

9. Give a brief account of Robert Morris's part in the Revolution.

10 *a.* Name three presidents who have been elected and two vice-presidents who have suceeeded to the presidency since the civil war. *b.* To what political party did each belong?

ANSWERS.

1. *a.* East of North Carolina. *b.* In 1585, Raleigh sent out a company which settled on Roanoke Island. This colony was a failure, so in 1587 over 100 colonists were left here, and when, three years later, assistance was sent to them, they were not to be found. This was Raleigh's "lost colony."

2. *a.* The Five Nations. *b.* In 1609, Champlain in company with a war party of Algonquins made his way southward from Quebec, and on the banks of Lake Champlain attacked and routed a band of Iroquois, thus making them enemies of the French.

3. *a.* Pennsylvania and Maryland. *b.* It marked the boun ary line between the free and slave states and was regarde as separating the North and South.

4. *a.* Bunker Hill, Prescott; Ticonderoga, Ethan Alle Invasion of Canada, Montgomery and Arnold. *b.* Montgom ery went to Canada by way of Lake Champlain. He capture St. Johns, took possession of Montreal, and at Quebec wa joined by Benedict Arnold, who with about a thousand me had journeyed thru Maine. They joined forces and attacke Quebec. Montgomery was killed and Arnold injured. portion of their army surrendered. The rest retreated.

5. Oriskany, a little east of the central part, on the Mo hawk river. Saratoga (Bemis Heights), eastern part, on th Hudson. White Plains, southeastern part. Ticonderoga northeastern part, on Lake Champlain. Stony Point, south eastern part, on Hudson river.

6. *a.* Finally in 1781. *b.* Congress had no power to enforc its acts.

7. Farragut. The Confederates had fortified the lowe Mississippi and prepared many obstructions to its navigation They had numerous forts, iron-clads and fire-rafts, and ha obstructed the channel with iron chains; but Farragut deter mined to sail past these, attack the fleets and take Ne Orleans, which he successfully accomplished. At Mobile Bay Farragut with a fleet of fourteen wooden and four iron-cla vessels attacked Admiral Buchanan, in charge of three gun boats and one ram, and aided by three strong garrisone forts. Farragut captured the "Tennessee," drove off o destroyed the other Confederate vessels and after severa days captured the forts, thus raising the blockade.

8. *a.* The land beyond the Rocky mountains and north o California. *b.* On the Louisiana purchase; upon early exploration, settlement, and occupation.

9. Robert Morris was a wealthy merchant of Philadelphia He was appointed financial agent for the government, and i was largely thru his efforts and ability to raise money fo the suffering soldiers that Washington's victories were mad possible.

10. *a.* Grant, Cleveland, McKinley, Arthur, Roosevelt. *b* Cleveland, Democrat; the others Republican.

ENGLISH COMPOSITION.

1. Make a single complex sentence of the following *statements:*

In ancient times a forest extended in a certain district of merry England. The district was pleasant. It was watered by the river Don. The forest was large. It covered the greater part of some beautiful hills and valleys. The hills and valleys lie between Sheffield and the pleasant town of Doncaster.

2. Condense the following, giving only the important ideas:

I was born to a small hereditary estate, which, according to the tradition of the village where it lies, was bounded by the same ditches and hedges in William the Conqueror's time that it is at present, and has been delivered from father to son, whole and entire, without the loss or acquisition of a single field or meadow, during the space of six hundred years.

3. Write a prose paraphrase of the following selection:

"Short in stature was he, but strongly built and athletic.
Broad in the shoulders, deep-chested, with muscles and sinews of iron.
Brown as a nut was his face, but his russet beard was already
Flaked with patches of snow, as hedges sometimes in November."

4-6. Develop, by means of details or particulars, the following topic; sentence into a paragraph of at least seventy-five words:

Seated on the piazza of the store and standing around it was a group of the magnates of the town. (Picture the old doctor, the young lawyer. the well-oiled and combed barber, the prosperous farmer, the postmaster—at once druggist, grocer, and merchant—and the school teacher.)

7. Express the following in three different ways:

Around the hall and in a small gallery were the books arranged in carved oaken bookcases.

8. Give and illustrate three rules for the use of capitals.

9. Write a paragraph on the topic:

What constitutes a fair examination?

10. Name three faults to be avoided in order to secure clearness in composition.

ANSWERS.

1. In ancient times, in a certain pleasant district of Merry England which was watered by the Don, extended a large forest covering the greater part of some beautiful hills and

valleys which lie between Sheffield and the pleasant town of Doncaster.

2. I inherited a small estate which according to village tradition has been delivered from father to son without change of boundaries for six hundred years.

3. He was short, strongly-built and athletic, with broad shoulders, deep chest, and strong and sinewy muscles. His face was brown as a nut and his russet beard had begun to turn gray.

4-6. The magnates of the town were gathered about the store. The fat postmaster, whose little store was grocery and drug shop and dry goods emporium for the neighborhood, sat on the piazza, acting as host and connecting the threads of conversation when they dropped. The old doctor had driven up in his sulky, and listened with the good-natured tolerance of one who knew the men and their families better than the men themselves did. The young lawyer was making the most of this opportunity to ingratiate himself and to deliver opinions that would carry weight. The barber, well-oiled and combed as if to advertise his business, now and then nodded obsequious approval as one of his customers expressed decided opinions. Standing on the outer edge of the crowd, as if unwilling to force himself into intimate relations, the village school teacher listened timidly, grateful that no one asked his opinion and thus required him to commit himself.

7. The books were arranged in carved oaken book cases, around the hall and in a small gallery. Arranged in carved oaken book-cases, around the hall and in a small gallery, were the books. The books were around the hall and in a small gallery, arranged in carved oaken book cases.

8. Every sentence should begin with a capital letter. A thing of beauty is a joy forever. Proper names should begin with capitals. *Albany* is the capital of *New York*. Direct quotations should begin with capitals. It is truthfully said, *B*etter three hours too soon than a minute too late.

9. An examination, to be fair should be clear and definite, with no hint in the question of the answer expected, and not too long to be completed by the average pupil during the time allotted to it. It should be such as to test the pupil's knowledge of underlying principles as well as of facts. All questions should be governed by the course of study arranged for that subject, and all rules and regulations laid down by the examiner should be strictly followed.

10. Misplaced modifiers, the careless use of the pronoun *it*, and placing a pronoun in such a way that its antecedent may be mistaken.

ARITHMETIC.

1. One-third the sum of two numbers is 384, the difference is 64. What are the numbers?

2. If a number when divided by 27 gives a remainder of 13. what will be the remainder when divided by 9? Why?

3, If the value of $\frac{1}{7}$ of $\frac{3}{8}$ of an estate is $4,500, what is the value of $\frac{1}{12}$ of $\frac{1}{14}$ of it? (Write out full analysis)

4. When it is 12 M in New York (74° west), what is the time in Manila (120° east)?

5. Which produces the greater per cent. of income and how much, 5% bonds at 120 or 4% bonds at 105?

6. What is the exact interest on $81 from Dec. 30, 1902, to March 12, 1903, at 6%?

7. A savings bank pays 4% interest compounded semi-annually. A makes a deposit of $50 every six months beginning July 1, 1901. What amount stands to his credit Jan. 1, 1903?

8. If A can do a piece of work in 6 days and B can do the same work in 8 days, how long will it take B to finish after they have worked together two days?

9. At $16 per M. board measure find the cost of 20 plank 2 in. by 8 in., 18 ft. long and 30 plank 1½ in. by 6 in., 10 feet long.

10. Find the square root of $\frac{2}{3}$, correct to thousandths.

ANSWERS.

1. 608 and 544.

2. 4. Because the remainder 13, which is too small to be divided by 27, may be divided by 9, and contained once with a remainder of 4.

3. $\frac{1}{7}$ of $\frac{3}{8}$ of an estate is $\frac{3}{56}$ of it. If $\frac{3}{56}$ of the estate is worth $4,500, $\frac{1}{56}$ of it will be worth $\frac{1}{3}$ of $4,500 which is $1,500, and $\frac{56}{56}$, the whole estate will be worth 56 times $1,500 or $84,000. $\frac{1}{12}$ of $\frac{1}{14}$ of it would be $\frac{1}{168}$ of it. If the whole estate is worth $84,000, $\frac{1}{168}$ of it will be worth $\frac{1}{168}$ of $84,000 which is $500.

4. Theoretically 12 o'clock 56 minutes a.m.

5. 5% bonds at 120 produce $\frac{5}{14}$% greater income, $\frac{5}{120}-\frac{4}{105}=\frac{1}{280}=\frac{5}{14}$%.

6. 96 cts. $\frac{\$81\times.06}{365}\times 72=\$.95868$.

7. $156.08, *before deposit.*

8. 3⅛ days.
9. $11.28.
10. .816+

CURRENT TOPICS.

1-2. Name four important questions discussed by President Roosevelt in his recent message to Congress and state his recommendations in relation to any one of them.

3. State the cause and the present status of the trouble between Venezuela and the European powers.

4. State what particular interest the United States has in the settlement of this Venezuelan trouble.

5. *a.* What is The Hague International Court of Arbitration? *b.* Name an event that has recently brought it to public notice.

6. *a.* State the essential feature of the Cuban reciprocity treaty. *b.* Give an argument either for or against this treaty.

7. What has been the result of the latest experiment in the Marconi system of wireless telegraphy?

8. *a.* Of what country is Dr. Adolf Lorenz a resident? *b.* What professional service has he recently rendered in this country?

9. Write a brief account of the public services of Thomas B. Reed.

10. State a fact which has contributed to the prominence of the life of each of the following: Charlemagne Tower, George Alfred Henty, Julia Dent Grant, Robert S. McCormick, William Booth, Alice Freeman Palmer.

ANSWERS.

1, 2. He recommended publicity as a curb upon trusts, little interference with the tariff, that anthracite coal be put on the free list, and reciprocity with Cuba.

3. England, Germany, Italy, and other powers found it impossible to collect the debts due from Venezuela, and so have declared war and are maintaining a blockade.

4. The Monroe doctrine would be involved if the settlement of the conflict should transfer territory to any European power.

5. *a.* It is a tribunal established by international representatives at The Hague to act as a court for the trial of international disputes that may be referred to it by the countries involved. *b.* On Oct. 14 it decided that Mexico must pay to the United States a million and a half dollars in Mexican currency, on account of "the Pious fund."

6. *a.* A reduction of the duty on Cuba sugar imported into the United States. *b.* In 1902 the president's message recommended lower duties on Cuban exports here to aid her commercial development. It was shown before the last Congress that under present conditions Cuban sugar cannot be shipped to this country at a profit. On the other hand the annual production is about 640,000 tons and the beet-sugar men claim that to bring this in at a lower duty will lessen their profit.

8. *a.* Austria. *b.* He has reduced a great many dislocations by the strength of his hands, without the use of a knife.

9. Thomas B. Reed first entered Congress in 1877, and became speaker of the house of representatives, resigning in 1899 to practice law in New York. He died Dec. 7, aged 63.

10. Charlemagne Tower succeeds Andrew D. White as ambassador to Germany. George Alfred Henty, a writer of books for boys, has recently died. Julia Dent Grant, widow of Gen. Grant, died Dec. 14, and was buried in the mausoleum beside her husband. Robert S. McCormick succeeds Charlemagne Tower as ambassador to Russia. Alice Freeman Palmer died Dec. 6 in Paris.

ALICE FREEMAN PALMER (American, 1855--1902) after graduation in 1876 from the University of Michigan taught in the seminary at Lake Geneva, Wis., 1876-7, in Saginaw. Mich., 1877-9; was professor of history at Wellesley 1879-81, and president 1881-7; and dean of the women's college, Chicago university, 1892-5. She was trustee of Wellesley, president of the Woman's Educational Association of Boston, and president of the corporation of the Institute for girls in Spain. She was a member of the Massachusetts board of education from 1889 to her death. In 1887 she married Prof. George Herbert Palmer of Harvard, and had no little influence upon social life there. She was also always in demand for educational lectures, and will be long remembered for the direction she gave to woman's education during her connection with Wellesley and with the University of Chicago, and in private life.

GEOGRAPHY.

1. *a.* Make a drawing to represent the position of the equator, the tropics, and the polar circles of the earth; *b.* mark the latitude of each.

2. Name two ocean currents and trace the course of each.

3. Locate a rainless region in Africa and in Asia; state why each is rainless.

4. Trace a water route from *a.* Buffalo to Chicago; *b.* Chicago to Duluth; *c.* Buffalo to Montreal; *d.* Buffalo to New York.

5. State five important causes of the great commercial wealth of this country

6. What countries of South America border on a. Atlantic; b. the Pacific; c. the Caribbean sea? d. What are inland?

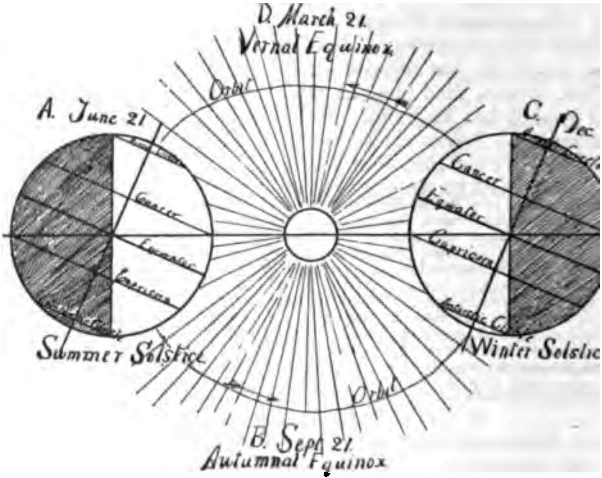
7. Name and locate a. four important mountain chain Europe; b. four important rivers; c. four important seapo

8. Name a mountain range, a river, an isthmus, two s and two straits, which lie on the boundary of Asia and on that of some other grand division of land.

9. a. Mention three products for which Australia is no b. Of what empire is Australia a part? c. What large isl near to and directly north of Australia?

10. a. Name four cities at, or near, the head of navigat on the Hudson river. b. Name a special manufacturing terest in each of two of these cities.

ANSWERS.



2. The Gulf stream is that part of the equatorial d which passes into and circles thru the Caribbean sea, ters the Gulf of Mexico, passes out of it between Flor and Cuba, flows north to Cape Hatteras, then turns to right and crosses the Atlantic to Europe, where it is divid part going south toward the equator, the rest northward p Scandinavia into the Arctic ocean. The Japan current sta from the Bay of Panama, and crosses the Pacific ocean to Philippines, where it is met by a current which issues fr

the China sea. The two run outside of Japan, round the northern limits of the Pacific and down again to California.

3. The Sahara is too far north to be reached by the equatorial rain belt, too far south to receive rains from westerly winds. The trade winds blow constantly, but they come from the northeast and cannot give out rain because they soon become so warm. Arabia is nearly rainless because its chains of mountains exclude the moisture from the sea.

4. *a.* Lake Erie, Detroit river, Lake St. Clair, St. Clair river, Lake Huron, Strait of Mackinac, Lake Michigan. *b.* Lake Michigan, Strait of Mackinac, Lake Huron, St. Mary's river, "Soo" canal, Lake Superior. *c.* Welland canal, Lake Ontario, St. Lawrence river. *d.* Erie canal, Hudson river.

5. Its position in relation to other countries, natural resources, climate, facilities for transportation, progressiveness of its people.

6. *a.* Guiana, Brazil, Uruguay, Argentina. *b.* Colombia, Ecuador, Peru, Chili. *c.* Colombia, Venezuela. *d.* Bolivia, Paraguay.

7. *a.* Alps, southern part; Pyrenees, southwestern part between France and Spain; Caucasus, southeastern border; Ural, eastern border. *b.* Rhine, rises in Alps, flows north into North sea; Rhone, rises in the Alps, flows south into into the Mediterranean sea, Danube rises in the Alps, flows southeast into the Black sea; Volga, rises in central Russia, flows southeast into Caspian sea; *c.* Liverpool, western part of England on the Irish sea; London, southeastern part of England at the mouth of the Thames; Hamburg, northern part of German empire on the North sea and at the mouth of the Elbe; Marseilles, southern part of France on the Mediterranean sea.

8. Ural mountains, Ural river, Isthmus of Suez, Caspian and Red seas, Strait Babel Mandeb, Bering strait.

9. *a.* Wool, gold, wheat, ostrich feathers. *b.* British empire. *c.* New Guinea.

10. *a.* Albany, Troy, Cohoes, Rensselaer. *b.* Troy, collars. Cohoes, woolen goods.

DRAWING.

1. *a.* Name in their order beginning with red, all the colors found in the spectrum chart of eighteen parts. *b.* Name three common flowers, and describe the color combinations found in the blossom of each.

2. *a.* Draw by geometric process, an equilateral triangle. *b.* Draw a circle tangent to each side of the triangle.

3. Make a working drawing of a common wooden spool.

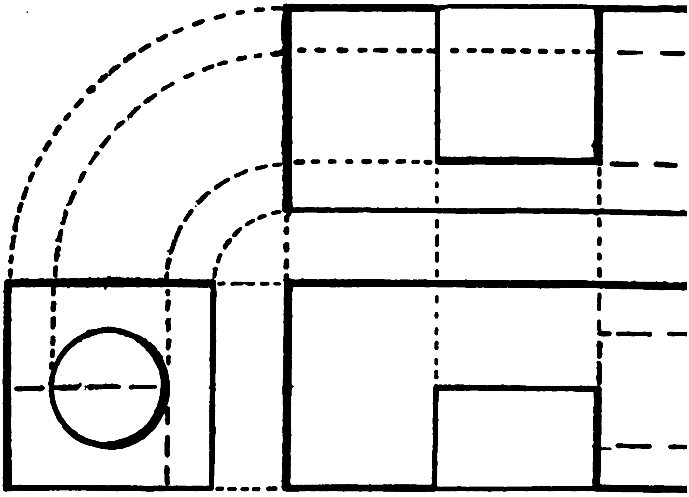
4. Draw the plan, front and side elevation of a one-inc circular card, placed with its face parallel to the side vertica plane of projection.

5. Sketch freehand to represent a group of three popla trees, the smallest of which, to be not less than two inche in height.

6. Sketch whatever you see thru the lower half of a window in the room in which you are sitting.

7. *a.* Draw in parallel perspective to represent a two-inc cube placed in front and below the eye. *b.* Repeat th answer given in *a.* and modify to represent some object o utility.

8. Read the projections given, and sketch in parallel perspective to represent the object described .



9. Draw five squares 1″ on a side and shade to illustrate scale of five tones.

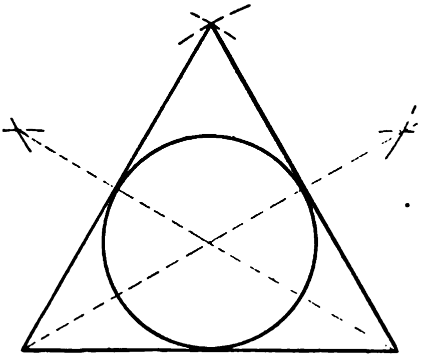
10. Draw to show the relative positions of E. L., G. L., C. V. M. P., and V. P.

ANSWERS.

1. *a.* Red, orange-red, red-orange, orange, yellow-orange orange-yellow, yellow, green-yellow, yellow-green, green blue-green, green-blue, blue, violet-blue, blue-violet, violet

red-violet, violet-red. *b.* Daisy, white, yellow, green-yellow, yellow-green. *c.* Dandelion, yellow. orange-yellow, green. *d.* Sweet-briar rose, tints of red, yellow, tints of yellow and green.

2.



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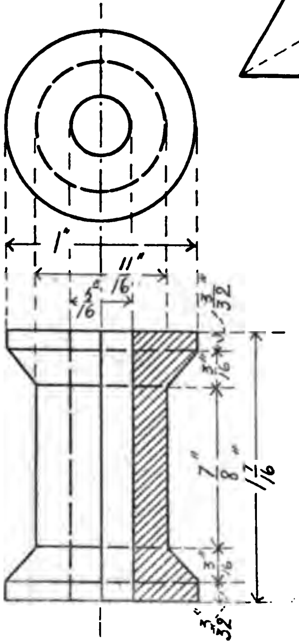

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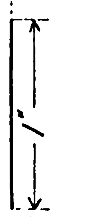

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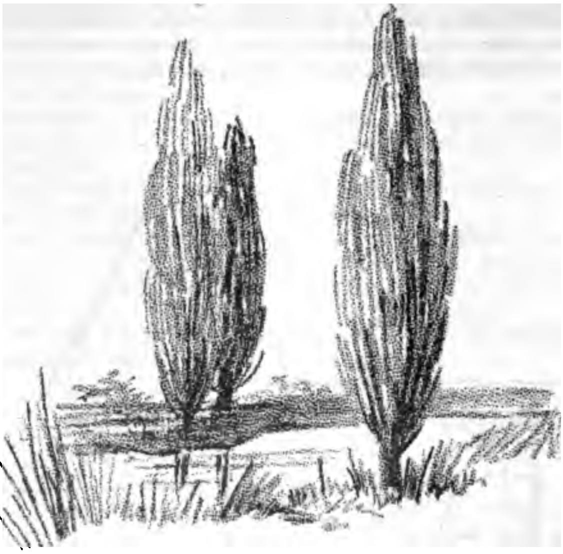

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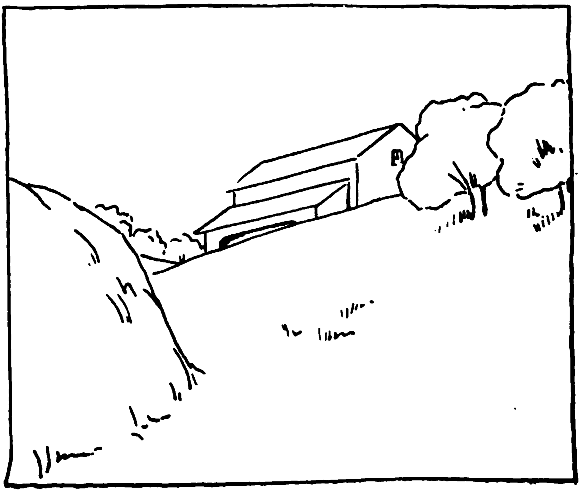

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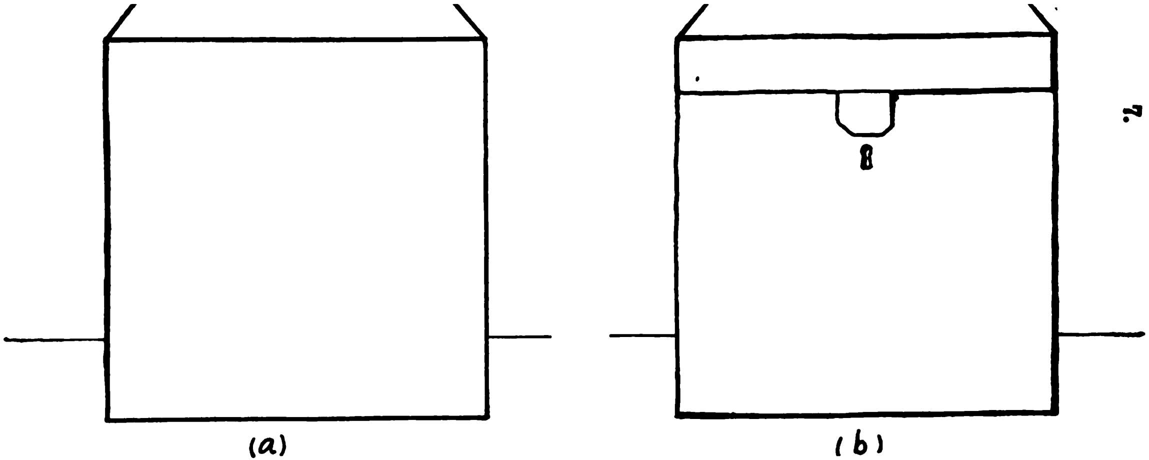
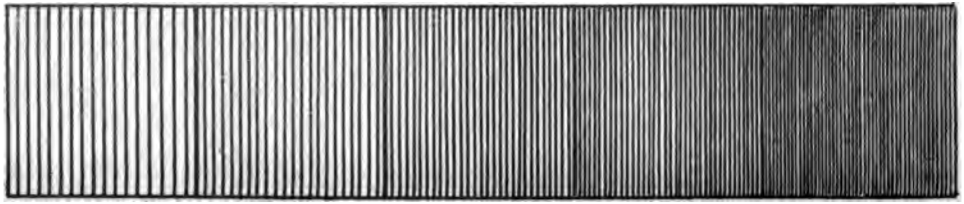


(a) (b)

(TOP).

9.



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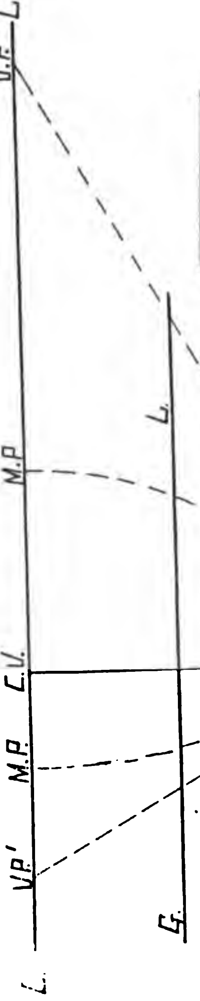

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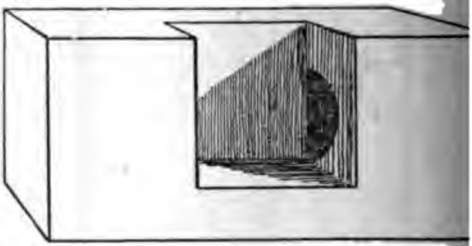

History of Our Times.

[illegible] current affairs [illegible] teacher. [illegible] It is thus very necessary for the teacher [illegible] The best aid for the teacher is Our Times. [illegible]

[illegible]

(See Our Times of February 1 and February 15.)

In what form have tariff questions come up at this session of Congress? What is reciprocity?

What will be the probable effect of the removal of the coal duty?

Give what, in your mind, are evidences of industrial prosperity in the United States.

What caused unusual interest in the election of a United States senator from Utah?

Why does it seem probable that the Irish land question will soon be settled?

Describe the efforts that have been made to settle the Venezuela dispute.

For what is Mary E. Wilkins Freeman noted?

Locate and describe the smallest republics.

What are some features of the new bankruptcy law?

Why are cattle men going to Canada?

Where will Canada build a ship canal, and what will be its effect?

Why is the situation in Eastern Europe considered serious?

How is it proposed to dispose of the silver question?

Describe the characteristics of the earliest known representative of the horse.

What portions of Canada are rich in timber?

For what are Leonard Wood, Fitzhugh Lee, Robley D. Evans, Joseph Choate, and Sam Walter Foss noted?

Describe the Becquerel rays.

Kellogg's Teachers' Bureau received more calls for well qualified teachers [illegible] than could be supplied by this Bureau. [illegible] years ago, hundreds of teachers have found positions by its aid. The manager has enlarged his quarters [illegible] East 9th St., New York. [illegible] circular "How to increase your salary," and list of vacancies.

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Theory and Practice of Teaching, 3d, 2d and 1st grades.
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Physiology, 3d and 2d grades.
Bookkeeping, 2d and 1st grades.
Civil Government, 2d and 1st grades.
Physical Geography, 1st grade.
Astronomy, professional grade.
Botany, " "
Physics, " "
Chemistry, " "
Geology, " "
Alcohol and its effects on the human body.
Rhetoric.
English Literature, 1st grade.
Natural Philosophy.
Algebra professional grade.
Geometry, " "
Latin, " "
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APRIL, 1904

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A Monthly Magazine of Pedagogy and General Culture *for* Teachers, Normal Schools, Training Classes, Reading Circles *and* Home Study

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Educational Foundations
Ossian H. Lang, Editor.

VOL. XIV. APRIL, 1903. No. 8

"The Freedom of the Teacher."

MR. CHARLES B. GILBERT is positive and vigorous in whatever he undertakes. His writings and lectures reveal the same strong characteristics. His article in the present number takes up for consideration a subject about which there is much discussion just now. The principles laid down in the first paragraph are the point about which the debating of the freedom of the teacher in the school-room must turn. It is well, therefore, to read what Mr. Gilbert says with great caution, noting all modifications, lest the article be translated into an argument for the destruction of all system and unity in the schools of a locality.

The subject here treated was brought before the Department of Superintendence of the N. E. A. by an address of Mr. Gilbert embodying many of the ideas presented in this number. I had read the manuscript of the article some weeks before the address was delivered, and did not experience any serious disagreement with any of the statements made in the former. Yet, whether it was that the emphasis given to certain points by the voice of the speaker, or whether Mr. Gilbert omitted some modifying phrases, the impression made upon me was that the address exceeded the bounds of pedagogic reason. Educators, with whom the address was discussed in private and who had not been privileged to read the article published in this number, seemed to draw the latter conclusion. On writing to Mr. Gilbert with reference to the matter I received the reply that the Cincinnati address put the matter rather more mildly than the present article. Here may be interesting suggestion for estimating the difference between reading an argument and listening to its oral presentation.

Whatever may be responsible for the difference in impression, Mr. Gilbert's article must be read with extreme caution. When he speaks of the folly of marking teachers, be sure to note that he refers merely to marking according to *arbitrary* standards. Leaving out the word arbitrary would make Mr. Gilbert's position untenable. That the system must tend to "re-enforce" the teacher, is correct, providing the teacher's use of his freedom re-enforces the system.

One point which is particularly liable to be misconstrued is to the effect that the teacher's first duty is "to ascertain and meet the needs of individual children under his care." The right sort of system represents the best law and reason in pedagogy. A teacher who departs from this in a vital matter assumes a great deal of responsibility. Take this simile. Physicians are generally agreed that a timely use of anti-toxin will, under ordinary circumstances, cure a case of diphtheria. That agreement constitutes a law of the medical system. A physician, meeting what he considered a peculiar case, decided to treat it in a peculiar manner without the use of anti-toxin, giving to the patient a treatment recommended by a Russian medical practitioner. The patient, a dear little girl of three years, died. The question is a serious one whether individual judgment should be permitted to set aside an important law of the system.

The teacher with the right sort of sense of personal responsibility to the children will be the very last to look for a large amount of personal freedom in school-room work. Just how much unity is essential for the good of the child in a school system is a large question, worthy of thoro reflection and discussion. Experimenting must have specific limits assigned to its scope. Where the system permits of too much freedom on the part of the teacher, the child is likely to be the sufferer. There may be such lack of unity, for instance, that a child on being transferred from one school to another or even from one teacher to another, might find himself undergoing as unique an experience as would a patient subjected to treatment successively by a homeopath, an allopath, a hydropath, an osteopath, a Christian Science healer, an Indian medicine man, and a veterinary surgeon.

A close and cautious reading of Mr. Gilbert's article will prove most profitable to teachers and supervising officers. The latter especially may derive from it many suggestions for rendering themselves more efficient and more helpful to the teachers under their charge.

Teachers' Meetings in April.

April 1-3.—Central Nebraska Educational Association, at Grand Island.

April 2-4.—Southern Illinois Teachers' Association, at East St. Louis.

April 2-4.—Southeastern Iowa Teachers' Association at Burlington.

April 3-4.—Northern Central Association of Colleges and Secondary Schools, at Chicago.

April 3-4.—Southern Wisconsin Teachers' As'n, at Madison.

April 4-6.—Northern Indiana Teachers' Association at Richmond.

April 8-10.—Alabama State Colored Teachers' Association, at Montgomery.

April 9-11.—Southern Indiana Teachers' Association, at Vincennes. A. E. Humke, executive committee.

April 10-11.—Northern Minnesota Educational Association, at St. Cloud.

April 14-16.—Provincial Ed'c'al Association, at Toronto, Ont.

April 14-17.—Western Drawing Teachers' Association, at Springfield, Ill.; Mary A. Grimes, Racine, Wis., secretary.

April 16-18.—Inland Empire Teachers' Association, at Walla Walla, Wash.

April 22-24.—Eastern Art Teachers' Association, at Washington and Baltimore. Prof. Alfred V. Churchill, president.

April 25.—New Jersey High School Teachers' Association, at Newark. W. A. Wetzel, president; Cornelia E. MacMullen, East Orange, secretary.

April 28-May 1.—Florida State Colored Teachers' Association, at Ocala.

The Scope of School Education.

By WILLIAM T. HARRIS, U. S. Com. of Education.

(Abstract of the report of a lecture.)

HERBERT SPENCER regards education as the subject which involves all other subjects, and the one in which they should all culminate. But some one has better said that school education is the giving to man the possession of the instrumentalities of intelligence.

There are three epochs of school education. The first or elementary stage is the opening of the five windows of the soul.

First, arithmetic is the foundation by which we measure and count all things inorganic.

Then we come to another window, that of elementary geography. The child begins to peep into the organization of things, the growth of plants, and the formation of the continents and the earth.

Thirdly, he learns to read and write, and gets a glimpse into literature. Literature lifts up the pupil into the realms of human nature and discloses the motives which govern the action of men. Yet Spencer puts this last in his course of study. After learning all science has to give, after learning one's trade, and the care of his body, he would then, if there were leisure, permit literature and art.

The fourth window of the soul is grammar, wherein we have a glimpse of the logical structure of the intellect as revealed in language.

The fifth window is history (that of his own country) wherein he sees revealed the aspirations of his countrymen, his own nature, written out in colossal letters.

Secondary education takes up human learning and continues it along the same lines. Then come Greek *and* Latin, and here is opened up a great field of study into the embryology of our civilization. In the dead languages we have three great threads running thru the history of human progress. The Greek, with its literature and esthetic art and its philosophy, shows the higher forms of human freedom in contrast with the Egyptian, which showed only the struggle for freedom and never the man separated from the animal and the inorganic world.

The Roman, with the continual gaze upon the will of man, seeks the true form of contracts and treaties and corporations, and it essays the conquering of men and reducing them to obedience to civil law.

The Hebrew thread is the religious one which we recognize in the celebration of worship one day each week and in the various holy days. So, with the secondary education, we begin the embryology of our forms of life.

The higher or collegiate education is the comparative step of education. Each branch is studied in the light of all the others. Natural science and sociology are investigated, logic and mental philosophy, ethics and rhetoric, as well as the philosophy of history and literature, and the comparative sciences, which furnish the light for the whole method of higher education.

The first, or elementary education, then, is but superficial, a mere inventory, the second insists on some reflection on what has been learned; and the third or higher education is the unity and comparison of all that has been learned, so that each is explained by the whole.

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Educators have adopted the course of study as it exists led by an unconscious or blind impulse. Herbert Spencer should have investigated and discovered its purpose, which is a far deeper one than he has thought out when he advocates its overthrow for the sake of knowledge that leads to direct self-preservation.

School Administration.

By Charles B. Gilbert, New York.

Freedom of the Teacher in the System.

AS I have said, the sole function of a school system is to secure better teaching thru improving the individual teachers and making it not only possible but easier for them to do their best work. The system which does not accomplish these ends, however carefully organized and skilfully managed it may be, fails to justify its existence and a system which in the slightest degree impairs the quality of the teaching done is a nuisance and a menace.

How may the school system re-enforce the teacher and conserve his freedom is our question for the current article. Possibly I should first answer the negative question, how may a system be so conducted as not to interfere with the work of the teacher? It is so easy to fall into the habit of considering the machine first and the individual school with its teacher and pupils afterward. The entire business of school boards, especially in large cities, with its complicated machinery, is insistent and brings constant pressure to bear upon the teachers to have a care lest the working of the machine be interfered with, so that instead of the machine being made to conform to the needs of the school-room, the school-room and the children and the teacher are made to conform to the needs of the machine.

My answer to the question is, first, by reducing the machinery to the minimum consistent with a reasonable degree of unity, eliminating all unnecessary red-tape, and all demands upon the teacher in addition to his work of teaching that it is possible to get along without.

A certain amount of detail is, of course, necessary; *records* must be kept and some statistics must be gathered, for statistics do not always lie and sometimes are even useful. Information regarding the attendance of children and conditions prevailing in and about the schools, which throw light upon the educational problem, is important and must be secured thru the teachers if at all. But there are many kinds of information secured thru the compiling of figures which are of no value to any one, or at least of not sufficient value to justify the sacrifice of time and effort required to secure them.

The passion for statistics which dominates some school superintendents is a dangerous one and easily runs into statistical dissipation. Many of the elaborate systems of keeping records of individual pupils are not only needless, but are a positive injury to both pupils and teachers. Upon this I have commented at length in a preceding article.

My second answer to the negative question is, avoid every device or method of organization which tends to lessen the teacher's individuality and sense of personal responsibility to the children. To transfer the sense of obligation from the children to the school administration is wrong, and this is too frequently a tendency of school systems.

The teacher in the school-room should always feel that his first duty and almost the sum of his duties is to ascertain and meet the needs of the individual children under his care. In the machine system the tendency is always to center the thought of the teacher upon, not the children, but the higher authorities, so that, instead of feeling responsible to them and being anxious to serve them, he becomes over-anxious to stand in with the administration and to sacrifice his own obligation to the higher law, to the demands of his superior officers for uniformity. This shifting of conscience is not only encouraged, but is almost necessitated by some prevalent systems of administration. In particular does the formal marking of teachers according to arbitrary standards, of which I spoke at length in the last article, tend toward this transfer of allegiance.

I do not need to further emphasize this point, but when a teacher ceases to feel that he is there primarily and wholly to serve the children and begins to feel that he is there to serve somebody else—school superintendent, school board, local politician—he ceases then and there to be as good a teacher as he might be. Hence, the first duty of the school administration is to see to it that demands upon the time and energy of the teacher which lessen the amount of good work that he can do for the children and all methods of treatment which lower his self-respect, weaken his individuality, and transfer his allegiance from the children to the machine are removed.

But there is a positive side to this question. A school system, properly organized and conducted, can directly and positively help the teaching and aid in conserving the teacher's freedom. In the first place it can, by proper processes of selection, secure and retain the best teachers; and this does not require formal, arbitrary systems of marking, but merely the exercise of ordinary good judgment and the maintenance of a rigid backbone. Most of the formal systems of marking teachers are cowardly; they are simply devices to make possible the shirking of responsibility. Given a reasonably good process of selection, helped by proper civil service rules, we will have a reasonably good corps of teachers in any system.

Now how can the system make this reasonably good corps better, keep the teachers up to the highest standards possible, and secure from them their very best work? First, by making them feel that they are persons of consequence whose judgments are worth considering and who may fairly be supposed to possess reasonably tender consciences, some professional ambition, and at least a fair degree of devotion to their work. I hold that the first duty of school superintendents and other officials is to lead the teachers to respect themselves, to feel that they are trusted and to impress upon them that the school officers, taking it for granted that they want to do their best, are anxious to help them.

Naturally the most helpful feature of the school organization to this end is some degree of personal acquaintance between the officials and the teachers. While this is easier to secure in a small system than in a large one, it is entirely possible in even the biggest system. Very large systems should be so organized as to distribute the supervising forces in such a way that some officers of consequence may come into contact with every teacher. Condensing the entire force of supervising officials into a great board who sit in common sessions and legislate and adjudicate is a waste of energy even in the largest systems. Supervising officials should be scattered where at least some of them may come into personal contact with the teachers and know their ambitions and aims and their merits as well as their faults and weaknesses, and may give the sort of inspiration and strength which is given only in personal contact. Any system that is so organized as to fail to secure this personal contact between the teachers of the class-rooms and the officials who are to direct them and pass upon them, in so far fails to do its duty and this applies equally to systems large and small. The personal, sympathetic intercourse of those who know more with those who know less, of the stronger directing minds with the directed minds who need help is the *sine qua non* of good school administration. This secured, it is possible to take cognizance of the ideas which the teachers themselves have.

The assumption, even tho it be tacit, that the superintendent or the body of supervisors and the principals know it all, is most pleasant to those officials, but it is an assumption contrary to fact. In nine cases out of ten the good teacher knows more about what ought to be done with the children than all the supervisors together. I am sure that if we omniscient superintendents were to confess, we should admit that the best things that we know in regard to teaching we have learned from good teachers in the class-rooms, and one reason why some superintendents holding high positions have not manifested any evidence of growth for years, is that they have ceased to think that the opinions of the teachers are worth anything and have ceased to consult them. There is much wisdom allowed to go to waste because supervising officials are too proud to use it.

I do not mean that the school officers should not, in the common phrase, "run their schools;" of course they should, but they should do it very modestly, remembering that the sum of the wisdom possessed by all the teachers is doubtless greater than that contained in their enlarged craniums, and there should be and in the best systems is, found a way to tap this fountain.

First, then, the school system should be so organized as to dignify the individual teacher, take account of his stock of ideas and use those that are found good, not only allowing him to use them in his own class-room, but distributing them for the general good. This is one of the advantages of society: what each possesses or discovers or knows becomes common property and enriches all the others. The supervising forces and the machinery of administration should be agencies for gathering and distributing these riches for the common good and the best way is by the personal contact of the supervising forces with the different teachers.

This contact should be secured in the school-room thru visitation and in private conferences out of the school-room, both with the teachers who need stimulation and help and those who have it to give. If a supervisor discovers that a teacher has a good thing, it is well for the supervisor to sit down with that teacher after school and find out all about it, if possible make suggestion for its improvement, and then take it around to other teachers for their help.

The most common and perhaps all told the most important part of the work of supervision in this connection is the visitation of the school-room. Another part is the private conference with the teachers, and the third is found in meetings of various sorts with teachers of all grades.

The discussion of some of these subjects must be deferred until another article. I wish to speak a little more about the private conference. In my judgment this is a means of help of which not enough is made. Usually in every system, however large, there is some official, the principal of the school at least and usually some one or more supervisors, who can go into the school-room often enough to see what is going on and can come into personal contact with most or all of the teachers.

Now suppose a supervisor has worked out wholly or partially an educational scheme which promises well, what is the best way to get it into operation? There are the various ways of which I have spoken; visitation of the classrooms and meetings should be employed, but it is very easy, as all superintendents know, for teachers to misunderstand instruction given while there are classes present and also that given in an address before a body of teachers. Some teachers can never be made to see the force or method of a new scheme except by first-hand contact and observation. Others will grasp a new idea much more quickly.

My suggestion to such a supervisor would be, pick out within your domain a few teachers who quickly grasp ideas, sit down with them and carefully explain what you want done, give the reasons for it, let the teachers the philosophy of your plan and its motive, supply th with the necessary material and tell them to go i their classrooms and work it out. Usually they will f complimented by your confidence and will take gr interest in the development of the plan. This is one of the private conference. The work goes into classroom, and is made practical, and any defects in original scheme are discovered. In later conferen these are talked over and remedies are suggested wh in turn are taken back to the school-room. When plan has not only been elaborated, but has been th worked out, it is ready to be used as an object lesson other teachers.

There is a sort of freemasonry among teachers, a others very quickly hear of these experiments and beco desirous to see them and imitate them and, without a especial effort, the particularly good work of the stro teachers, resulting from the private conference, becon the standard for many other teachers. A single go teacher in a large school working out some interesti plan has been known to modify the work of the ent school, and so again society profits by the individual well as strengthening the individual, and this is freedo

This work, which has resulted from the private co ference, can also be extended by direct efforts. Teach may be sent to visit it, model classes may be broug before meetings of teachers showing both how the wo is done and its results. Of this feature I will spe further when dealing with teachers' meetings. But the is another form of private conference which is also he ful. Not all the teachers can be given new and expe mental work to do; some are weak thru youth a immaturity, thru lack of suitable early training, or th natural deficiencies. Now these teachers can be mark *down* and dropped; that is one way of dealing with the and their places can be filled with others likely to be no better. Some, of course, will necessarily be dropped, those who have not the making of good teachers in them; but very many can be saved, and again, the most helpful way is thru the private conference. If a teacher of fairly good ability and healthy conscience and a reasonable degree of professional spirit is doing poor work, he furnishes at once the best opportunity for the principal and the supervisor to do their best work.

In speaking of supervisors I wish to be understood as including the principal, whom I have not here sufficiently differentiated, and, I would like here to put in a parenthesis on the "office principal." The first of all in a school system to succumb to the evils of red tape is commonly the principal; he sits in his office and digs at his figures until he forgets that he has a higher function to fill. In visiting schools I am always sure that I shall find some principals in their office, and almost equally sure that I shall not find others there. The principal is the supervising officer whose business it is first of all to be in personal contact with the teacher and to do the various things for his help of which I have spoken and am about to speak.

To return to the weak teacher. The first need is to find out what is the source of the teacher's weakness. This can be done primarily thru school-room visitation and secondarily thru the private conference. Many a discouraged young teacher whose school is too much for her and who goes home tired in body and mind to spend an anxious and sometimes a tearful night, could be saved all this distress if a sympathetic principal or supervisor were to spend a half hour in private conference with her, bringing the results of his experience and his superior wisdom to the reinforcement of the teacher. It is always a good plan to talk things over sympathetically and frankly with the weak teacher. Of course the private conference may be killing, but it should not be; it is entirely possible to point out faults and at the same time to point out remedies in such a way as to give encouragement rather than discouragement, and this is one of the chief functions of the supervising officer. A hint, a simple suggestion of some new plan, the stimulating of a new interest, the giving a new point of view, accompanied by a kindly interest and encouragement, will frequently make a good teacher of a poor one.

A very fine teacher said to me recently, rather sadly, that she was not altogether happy in her school. On close inquiry I drew from her the information that the trouble was that she found no sympathy in the principal. She was ambitious and capable; she wanted to do something rather more than the ordinary; her heart was in her work but she felt that her principal's heart was not there, but was rather in the machinery of the school. He would visit her occasionally, was never unkind, and she had, after repeated efforts, secured a half hour in which they might sit down together and talk over her ambitions and her schemes for work and the result was a chill and a disheartenment which, unless the inner fire burned very strongly, would in the end impair her efficiency. Now this principal was throwing away a golden opportunity. He wanted good work in his school and expected his teachers to teach well, but he was so concerned with the mechanical side of administration that he could not get into the heart of any of his school-rooms. The teacher had the freedom of isolation, not of society. A principal should arrange to have regular private conferences with each of his teachers, encouraging them to talk freely of their ambitions and difficulties, and suggesting, helping, and stimulating in turn, giving this one a new and interesting piece of work to do, giving that one advice as to some weak spot and leading them all to *feel that* he is interested in all and that the school is a society and that the skill and knowledge and wisdom possessed by any are the common property of all; that they are all working for one end.

The general supervisor cannot do this sort of thing so systematically as the principal, but can do something, and should make it a point to do as much as possible. In these private conferences sometimes most surprising light is thrown upon a teacher's work.

The other agencies of which I have spoken are important, but I believe that the most important agency of all for helping the teacher is the personal conference in which the teacher's importance is recognized and his individuality both conserved and strengthened, and it is the agency perhaps most of all neglected. I find that principals and supervisors often look timidly upon private conferences, especially with weak teachers. They let them go along for an indefinite length of time without counsel, worry over their defects, and when the time comes for passing judgment, are compelled to admit that they have not done all that they could to help them, altho aware of their weakness.

The supervising officer is a kind of distributing agent receiving what teachers can give and giving what is received to those who need it and he must not, if he would be worthy of his office, let any amount of detail work, any consideration for the mechanical part of the administration stand in the way of this personal co-operative work with the individual teachers. For let us remember that school is a society in which all share the good or ill; that this is as true of the teachers as it is of the children.

Recall what was said in a previous article, that individual freedom is often impaired by the excessive demands of the social whole and the obliterating of the individual, but that true freedom is to be secured, not by a return to isolation, which is in reality extreme bondage, but rather by a proper use of society. The individual teacher should be strengthened, not weakened, by belonging to a system. The strength and the wisdom of the whole is greater than that of the individual, but only when each individual is encouraged to exercise his own strength and also to share with others. So that for teachers as for children a school system should be a co-operative society, having for its motto "each for all and all for each," and the administrative forces fulfil their function when they so distribute the common good, that each individual has all of his own and all that he can receive from the others.

In subsequent articles I shall speak specifically of the visitation of the school-room and the use of various kinds of meetings for the re-enforcement of the individual teacher.

QUESTIONS.

1. What should be the chief aim in constructing or operating an educational system with reference to the freedom of the individual teacher?

2. How can a system of instruction be made to re-enforce the individual teacher?

3. What is meant by a reasonable degree of unity in a system of schools?

4. What other essentials besides educational conscience, professional ambition, and devotion to their work, must be possessed by teachers to entitle them to a fair amount of professional freedom in the class-room?

5. Describe an "office principal." In what essentials does he differ from a book- and time-keeper? (A prize is offered to any one who can tell the difference.)

6. How may the teaching quality in a system of schools be most efficiently improved?

Educational Classics.

Montaigne on Education.

Selections from the *Essais* by MICHAEL SEIGNEUR DE MONTAIGNE.

THE greatest and most important difficulty of human science is the education of children.

. . . .

For not having chosen the right course, a man often wastes much strength and consumes considerable time in training up children to things, for which, by their natural aversion, they are totally unfit.

. . . .

Upon the choice of the tutor or governor depends the whole success of a boy's education.

. . . .

For a boy of quality, then, who pretends to letters not on account of profit (for so mean an object as that is unworthy of the grace and favor of the Muses; and, moreover, in that a man directs his service to and professes to depend upon others), nor so much for outward ornament, as for his own proper and peculiar use, and to furnish and enrich himself within, having rather a desire to go out an accomplished cavalier and a fine gentleman, than a mere scholar and a learned man; for such a one, I say, I would also have his friends solicitous to find him out a tutor, who has rather a well-made than a well-filled head; seeking, indeed, both, if such a person can be found, but rather to prefer his manners and his judgment before mere learning, and that this man should exercise his charge after a new method.

It is the custom of schoolmasters to be eternally talking into their pupils' ears, as if they were pouring into a funnel. I would have the teacher permit his pupil himself to taste and relish things, and of himself to choose and discern them, sometimes opening the way to him, and sometimes leaving him to break the ice himself; that is, I would not have the teacher alone invent and speak, but that he should also let his pupil speak in turn. Socrates, and since him Arcesilaus, made their scholars speak first, and then they spoke to them. As Cicero puts it thus: "The authority of those who teach is very often an impediment to those who desire to learn." It is good to make the boy, like a young horse, trot before that the teacher may judge of his going, and how much he is to abate of his own speed, to accommodate himself to the vigor and capacity of the other.

. . . .

Let the master not only examine a boy about the grammatical construction of the bare words of his lesson, but about the sense and meaning of them, and let him judge of the profit he has made, not by the testimony of his memory, but by that of his life. Let him make him put what he hath learned into a hundred several forms, and accommodate it to so many several subjects, to see if he yet rightly comprehends it, and has made it his own, taking instruction of his progress by the pedagogic institutions of Plato. It is a sign of crudity and indigestion to vomit up what we eat in the same condition it was swallowed; the stomach has not performed its office unless it has altered the form and condition of what was committed to it.

. . . .

Bees cull their several sweets from this flower and that blossom, here and there where they find them, but themselves afterwards make the honey, which is all and purely their own, and no more thyme and marjoram: so the several fragments he borrows from others he will transform and shuffle together to compile a work that *shall be* absolutely his own.

. . . .

Mere bookish learning is both troublesome and ungraceful; and tho it may serve for some kind of ornament, there is yet no foundation for any superstructure to be built upon it, according to the opinion of Plato, who says that constancy, faith, and sincerity are the true philosophy, and the other sciences, that are directed to other ends, mere adulterate paint. I could wish that Paluel or Pompey, the two famous dancing masters of my time, could have taught us to cut capers, by only seeing them do it, without stirring from our places, as these men pretend to inform the understanding, without ever setting it to work; or that we could learn to ride, handle a pike, touch a lute, or sing, without the trouble of practice, as these attempt to make us judge and speak well, without exercising us in judging and speaking.

. . . .

Conversation with men is of very great use, and travel into foreign countries of singular advantage; not to bring back (as most of our young monsieurs do) an account only of how many paces Santa Rotonda is in circuit; or of the richness of Signora Livia's attire; or, as some others, how much Nero's face, in a statue in such an old ruin, is longer and broader than that made for him on some medal; but to be able chiefly to give an account of the humors, manners, customs, and laws of those nations where he has been, and that we may whet and sharpen our wits by rubbing them against those of others. I would that a boy be sent abroad very young, and first, to kill two birds with one stone, into those neighboring nations whose language differs most from our own, and for which, if it be not formed betimes, the tongue will grow too stiff to bend.

A child should not be brought up in his mother's lap. Mothers are too tender, and their natural affection is apt to make the most discreet of them all so over-fond, that they can neither find in their hearts to give them due correction for the faults they commit, nor suffer them to be brought up in those hardships and hazards they ought to be.

. . . .

Whoever will breed a boy to be good for anything when he comes to be a man, must by no means spare him, when young, and must very often transgress the rules of physic. As Horace sings:

> "He must sharp cold and scorching heat despise,
> And most tempt danger where most danger lies."

It is not enough to fortify his soul, you are also to make his sinews strong; for the soul will be oppressed, if not assisted by the members, and would have too hard a task to discharge two offices alone. I know very well, to my cost, how much mine groans under the burden, for being accommodated with a body so tender and indisposed, as eternally leans and presses upon her; and often in my reading perceive, that our masters, in their writings, make examples pass for magnanimity and fortitude of mind, which really are rather toughness of skin and hardness of bones; for I have seen men, women, and children, naturally born of so hard and insensible a constitution of body, that a sound cudgeling has been less to them than a flirt with a finger would have been to me, and that would neither cry out, wince, nor shrink for a good swinging beating; and when wrestlers counterfeit the philosophers in patience, it is rather strength of nerves than stoutness of heart. Now to be inured to undergo labor, is to be accustomed to endure pain. "Labor hardens us against pain."- -Cicero.

. . . .

I have been present, when, whilst they at the upper end of the chamber have been only commending the beauty of the arras, or the flavor of the wine, many *things* that have been very finely said at the lower end of the table have been lost and thrown away. Let him examine every man's talent—a peasant, a bricklayer, or a passenger; a man may learn something from every one of these in their several capacities, and something will be picked out of their discourse, whereof some use may be made at one time or another; nay even the folly and impertinence of others will contribute to his instruction. By observing the graces and fashions of all he sees, he will create to himself an emulation of the good, and a contempt of the bad.

Let an honest curiosity be suggested to his fancy of being inquisitive after everything; whatever there is singular and rare near the place where he is, let him go and see it; a fine house, a delicate fountain, an eminent man, and the place where a battle has been anciently fought.

. . . .

By "conversing with men" I mean also, and principally, those who only live in the records of history, the boy shall, by reading those books, converse with the great and heroic souls of the best ages. It is an idle and vain study to those who make it so, by doing it after a negligent manner, but to those who do it with care and observation, it is a study of inestimable fruit and value; and the only study, as Plato reports, that the Lacedæmonians reserved to themselves. What profit shall he not reap as to the business of men, by reading the lives of Plutarch? But, withal, let my governor remember to what end his instructions are principally directed, and that he do not so much imprint in his pupil's memory, the date of the ruin of Carthage, as the manners of Hannibal and Scipio; nor so such where Marcellus died, as why it was unworthy of his duty that he died there.

. . . .

A man may say too much even upon the best subjects, and Alexandridas did justly reproach him who made very good, but too long speeches to the Ephori, when he said: "O stranger! thou speakest the things thou shouldst speak, but not after the manner that thou shouldst speak them." Such as have lean and spare bodies stuff themselves out with clothes; so they who are defective in matter, endeavor to make amends with words.

. . . .

The chief education with which one should season his understanding, ought to be that which regulates his manners and his sense; that teaches him to know himself, and *how both well to die and well to live.* Amongst the liberal sciences, let us begin with that that makes us free; not that they do not all serve in some measure to to the instruction and use of life, as all other things in some sort also do; but let us make choice of that which directly and professedly serves to that end.

If we are once able to restrain the offices of human life within their just and natural limits, we shall find that most of the sciences in use are of no great use to us, and even in those that are, that there are many very unnecessary cavities and dilatations which we had better let alone, and following Socrates' direction, limit the course of our studies to those things only where a true and real utility and advantage are to be expected and found.

. . . .

The most manifest sign of wisdom is a continual cheerfulness; her state is like that of things in the regions above the moon, always clear and serene.

. . . .

Our exercises and recreations, running, wrestling, music, dancing, hunting, riding, and fencing, will prove to be a good part of our study. It is not a soul, it is not a body that we are training up, but a man, and we ought not to divide him. And, as Plato says, we are not to fashion one without the other, but make them draw together like two horses harnessed to a coach. By which saying of his, does he not seem to allow more time for, and to take more care of, exercises for the body, and to believe that the mind in a good proportion does her business at the same time too?

As to the rest, this method of education ought to be carried on with a severe sweetness quite contrary to the practice of our pedants, who, instead of tempting and alluring children to letters by apt and gentle ways, do in truth present nothing before them but rods and ferules, horror and cruelty. Away with this violence! away with this compulsion! than which I certainly believe nothing more dulls and degenerates a well-descended nature. If you would have him apprehend shame and chastisement, do not harden him to them; inure him to heat and cold, to wind and sun, and to dangers that he ought to despise; wean him from all effeminacy, and delicacy in clothes and lodging, eating and drinking; accustom him to every thing, that he may not be a Sir Paris, a carpet-knight, but a sinewy, hardy, and vigorous young man.

. . . .

How much more decent would it be to see the class-rooms strewn with green leaves and fine flowers, than with the bloody stumps of birch and willows? Were it left to my ordering, I should paint the school with the pictures of joy and gladness, Flora and the Graces, as the philosopher Speusippus did his. Where their profit is, let them there have their pleasure too.

. . . .

Let the boy be able to do everything, but love to do nothing, but what is good.

. . . .

The conduct of our lives is the true mirror of our doctrine. Zeuxidamus, to one who asked him, why the Lacedæmonians did not commit their constitutions of chivalry to writing, and deliver them to their young men to read, made answer, that it was because they would inure them to action, and not amuse them with words.

. . . .

The world is nothing but babble; and I hardly ever yet saw that man who did not rather prate too much, than speak too little; and yet half of our age is embezzled this way. We are kept four or five years to learn words only, and to tack them together into clauses; as many more to form them into a long discourse, divided into four or five parts; and other five years at least to learn succinctly to mix and interweave them after a subtle and intricate manner. Let us leave all this to those who make a profession of it.

. . . .

We do not pretend to breed a grammarian or logician, but a *gentleman*. Let but our pupil be well furnished with things, words will follow but too fast. For my part, I hold, and Socrates is positive in it, that whoever has in his mind a sprightly and clear imagination, he will express it well enough in one kind of tongue or another, and if he be dumb, by signs.

. . . .

Menander's answer had this meaning, who being reproved by a friend, the time drawing on at which he had promised a comedy that he had not yet fallen in hand with it: "It is made and ready," said he, "all but the verses." Having contrived the subject, and disposed the scenes in his fancy, he took little care for the rest.

. . . .

In my infancy, and before I began to speak, my father committed me to the care of a German, who since died a famous physician in France, totally ignorant of our language, but very fluent and a great critic in Latin! This man, whom my father had fetched out of his own country, and whom he paid a very large salary for this only end, had me continually in his arms: to him there were also joined two others of the same nation, but of inferior learning, to attend me, and sometimes to relieve him; who all of them entertained me with no other language but Latin. As to the rest of his family, it was an inviolable rule, that neither himself, nor my mother, man or maid, should speak anything in my company but such Latin words as everyone had learned only to gabble with me. It is not to be imagined how great an advantage this proved to the whole family; my father and my mother by this means learned Latin enough to understand it perfectly well, and to speak it to such a degree as was sufficient for any necessary use; as also those of the servants did, who were most frequently with me. In short, we Latined it at such a rate, that it overflowed to all the neighboring villages, where there yet remain, that have established themselves by custom, several Latin appellations of artisans and their tools. As for what concerns myself, I was above six years of age before I understood either French or Perigordin, any more than Arabic; and without art, book, grammar, or precept, whipping, or the expense of a tear, I had by that time learned to speak Latin as my master himself. If, for example, they were to give me a theme after the college fashion, they gave it to others in French, but to me they were to give it in bad Latin, to turn it into that which was pure and good. And Nicholas Grouchy, who wrote a book "De Comitiis Romanorum;" William Guerente, who wrote a comment upon Aristotle; George Buchanan, that great Scotch poet; and Mark Antony Muret (whom France and Italy have acknowledged for the best orator of his time), my domestic tutors, have all of them often told me, that I had in my infancy that language so very fluent and ready, that they were afraid to enter into discourse with me; and particularly Buchanan, whom I since saw attending the late Mareschal de Brissac, then told me, that he was about to write a treatise of education, the example of which he intended to take from mine, for he was then tutor to that Count de Brissac who afterwards proved so valiant and so brave a gentleman.

As to Greek, of which I have but a mere smattering, my father also designed to have it taught me by a trick; but a new one, and by way of sport; tossing our declensions to and fro, after the manner of those who, by certain games at tables and chess, learn geometry and arithmetic. For he, amongst other rules, had been advised to make me relish science and duty by an unforced will and of my own voluntary motion, and to educate my soul in all liberty and delight, without any severity or constraint; which also he was an observer of to such a degree even of superstition, if I may say so, that some being of opinion, that it did trouble and disturb the brains of children suddenly to wake them in the morning, and to snatch them violently and overhastily from sleep (wherein they were much more profoundly involved than we), he caused me to be waked by the sound of some musical instrument, and was never unprovided of a musician for that purpose.

By this example you may judge of the rest, this alone being sufficient to recommend both the prudence and the affection of so good a father, who is not to be blamed if he did not reap fruits answerable to so exquisite a culture. Of this two things were the cause: First, a sterile and improper soil; for tho I was of a strong and healthful constitution, and of a disposition tolerably sweet and tractable, yet I was withal so heavy, idle, and indisposed, that they could not rouse me from my sloth, not even to get me out to play. What I saw, I saw clearly enough, and under this heavy complexion nourished a bold imagination, and opinions above my age. I had a slothful wit that would go no faster than it was led, a slow understanding, a languishing invention, and above all, incredible defect of memory, so that it is no wonder if from all these nothing considerable can be extracted. Secondly (like those who, impatient of a long and steady cure, submit to all sorts of prescriptions and receipts), the good man being extremely timorous of any way failing in a thing he had so wholly set his heart upon, suffered himself at last to be overruled by the common opinion, and complying with the method of the time, having no more those persons he had brought out of Italy, and who had given him the first model of education, about him, he sent me at six years of age to the College of Guienne, at that time the best and most flourishing in France. And there it was not possible to add anything to the care he had to provide me the most able tutors, with all other circumstances of education, reserving also several particular rules contrary to the college practice; but so it was, that with all these precautions, it was a college still. My Latin immediately grew corrupt, of which also by discontinuance I have since lost all manner of use; so that this new way of education served me to no other end than only at my first coming to prefer me to the first forms; for at thirteen years old, that I came out of the college, I had run thru my whole course (as they call it) and in truth without any manner of improvement, that I can honestly brag of in all this time.

The first thing that gave me any taste for books was the pleasure I took in reading the fables of Ovid's Metamorphoses, and with them I was so taken, that being but seven or eight years old, I would steal from all other diversions to read them, both by reason that this was my own natural language, the easiest book that I was acquainted with, and for the subject, the most accommodated to the capacity of my age; for as for Lancelot of the Lake, Amadis of Gaul, Huon of Bourdeaux, and such trumpery, which children are most delighted with, I had never so much as heard their names, no more than I yet know what they contain; so exact was the disciplin wherein I was brought up. But this was enough to mak me neglect the other lessons that were prescribed me and here it was infinitely to my advantage, to have to d with an understanding tutor, who very well knew discreetly to connive at this and other truantries of th same nature; for by this means I ran thru Virgil' Æneid, Terence, Plautus, and some Italian comedies allured by the softness and pleasure of the subject whereas had he been so foolish as to have taken me of this diversion, I do really believe I had brought nothing away from the college but a hatred of books, as almost all our young gentlemen do.

But he carried himself very discreetly in that business, seeming to take no notice, and allowing me only such time as I could steal from my other regular studies, which whetted my appetite to devour those books. Fo the chief things my father expected from their endeavor to whom he had delivered me for education, were affability of manners, and good humor; and, to say the truth, my manners had no other vice but sloth and want o mettle. There was no fear that I should do ill, but that I should do nothing; nobody suspected that I should be wicked, but only useless; they foresaw an idleness, but no malice in my nature; and I find it falls out accordingly.

. . . .

In great and populous cities there should be theaters erected for spectacular entertainments, if but to divert the people from worse and more private actions.

To return to my subject, there is nothing like alluring the appetite and affections; otherwise you make nothing but so many asses laden with books, and by dint of the lash, you give them their pocketful of learning to keep; whereas, to do well, you should not only lodge it with them, but make them espouse it.

History of Education.

The Revival—Humanism.

[Adapted for EDUCATIONAL FOUNDATIONS from Weiner's "Geschichte der Paedagogik.]

AT the end of the Middle Ages a strong attempt was made to release education from the domination of the scholastic system. This attempt found expression first in the so-called Humanistic movement. Its leaders advocated making education stand for a genuine and thoro general mental culture which, they believed, could best be attained by a study of Greek and Roman literature.

The purpose of the Humanists was the revival of classical learning. The cradle of the movement was in Italy. This was natural, for of all the living races of that day, the Italians were bound most closely by both language and history to the great, classical period.

Petrarch (d. 1374) and Boccaccio (d. 1375), two illustrious Italian poets, opened the way for the movement. The former was the first to re-awaken a zeal for the study of the Latin classics; the latter was influential chiefly in directing attention to Greek literature as the source of the beauty and wealth of intellect among the ancients. In a short time both found a host of followers, who traveled thru the leading cities of Italy, telling wherever they went of the beauty and grandeur of the classical languages and writings.

When, after the fall of Constantinople (1453), hosts of Greek scholars found refuge in Italy, the success of the Humanistic movement was assured. Princes and cities strove for the honor of cultivating the arts and sciences, and in offering homes to the representatives of the new culture. Florence under the brilliant leadership of the Medici, ranked first among the humanistic strongholds.

The Platonic academy, the work of Marsilius Ficinus, became the rallying point of the noblest and most scholarly men of the time.

With the rise of Humanism, Quintilian was restored to honor. Just as the leaders of the new movement adopted his ideal of culture—classical eloquence—as their own, so too, did they make his pedagogical principles the standard for their system of education and instruction. Guarino, the teacher of Prince Lionello of Ferrara, sought to obey them; Vittorino of Feltre (d. 1477) tried to exemplify them in his school at Mantua; Vergerius (d. 1428) and Mapheus Vegius (d. 1458) repeated them more less literally in their pedagogical works.

Vittorino da Feltre.

The school of Vittorino da Feltre, the most celebrated educator of his day, will be given closer consideration, as it may be taken as a model of the Italian Humanistic schools. In addition to special teachers for the Latin language, logic, metaphysics, mathematics, painting, and music, this school had, in its faculty, four learned Greeks who gave instruction in the language and literature of their country. All instruction in the school was based on the reading of Homer and Vergil, Demosthenes and Cicero. It was only after having attained a sufficient knowledge of these most important representatives of Roman and Greek poetry and eloquence that the pupils were allowed to take up other classical authors; only those were studied who were entirely satisfactory from an ethical point of view. Vittorino trained his students to interpret the grammatical and historical works of the ancients, and also gave them regular drills in speaking and writing the language. The final aim of the scholars of the day was to obtain skill in these two branches.

Vittorino was in advance of other Humanists in that he attached as much importance to the development of the characters of his students as he did to their intellectual advancement. He himself gave them instruction in religion, required them to attend church every day, and emphasized the importance of discipline and order in the school. The excessive use of corporal punishment that had been in vogue in the schools of the medieval period, he set aside on the ground that it was incompatible with the principles of humanity. He and most of his contemporaries regarded the awakening of ambition as being of very great value from an educational point of view.

In order to make the development of his pupils as harmonious and thoro as possible, Vittorino laid special emphasis on the necessity of caring for the body. The boys were required to follow the custom of their elders, practicing daily in riding, wrestling, fighting, archery, racing, and swimming; to undertake all kinds of warlike games; and to do without any luxuries in food or drinks. As most of the pupils belonged to wealthy families, this was a most significant plan. They were also instructed in dancing and in etiquette.

Erasmus.

During the fifteenth century, the renown of the Italian Humanists spread thru the entire Western world. In their schools were to found men and youths eager for knowledge, from every country in the world. Returning home, these scholars sought by word and pen to arouse the people of their own land to an interest in the new knowledge. In this attempt they frequently had to contend with the stubborn opposition of the scholastics, who were still in power. This was the case in France, England, and in Germany.

The most eminent Humanist of Germanic Europe was Desiderius Erasmus (1467–1536). He worked unceasingly in the field of philosophy, and at the same time, wrote numerous pedagogical treatises. He sought in every way possible to gain an introduction into the schools for the educational aims which he himself advocated. All his writings on education and instruction clearly show the influence of Quintilian. In agreement with the Roman rhetorician he demanded that instruction in Greek should be given before that in Latin, and advocated having more advanced students translate from Greek into Latin, so that by comparison, they might obtain an insight into the peculiarities of both languages. According to Erasmus, the study of ancient languages should produce two results; it should lead to a knowledge of the languages themselves and to a knowledge of other special facts. He maintained that the language had to be learned before a knowledge of these special facts could be acquired. Hence he advocated having instruction in grammar given first. Then he wished the pupils to be led to read as soon as possible, so that thru the aid of good models and their own attempts at speaking they might attain the desired proficiency in expression. In choosing works for reading, Erasmus would consider first beauty of form and interesting contents. For this reason, he unhesitatingly recommended the dramas of Terence and Aristophanes, and the poems of Lucian and Horace for use in schools. That he attached but very slight weight to the ethical import of an author is shown most clearly by his own work entitled "Colloquia," which was designed to give the pupils practice in Latin expression; on account of the satirical and often immoral character of these "Colloquia" Luther urged their banishment from the schools.

Erasmus's work entitled "Ciceronianus" shows a wonderful grasp of the imitation of classical Latinity. In this, he scoffs at one-sided, unintelligent reverence for Ciceronian Latin. He says: "The one who deserves the honorable name, 'Ciceronian,' is not he who merely adorns his language outwardly, by phrases borrowed from Cicero, but rather it is he who has learned from Cicero to use the appropriate expression for every thought."

Charles Hoole.

Charles Hoole was born in 1610, was graduated at Oxford and became a teacher at Rotherham. Here he wrote a book entitled "The Reformed School," and it is his writings on education that mark him as one of the thinkers of that period on education. In his day it was deemed needful to speak in Latin and Hoole wrote on means to this end; he tries to point out the best means.

He took the same ground that has been taken since respecting the uselessness of learning the rules of grammar in order to understand how to speak and write the language. He says:

"Children are led most by sense, and grammar rules, consisting of general rules, are too subtle for them. Children's wits are weak, active, and lively; grammar notions are abstractive, dull, and lifeless. It is one thing to learn the Latin tongue, and another to learn the grammar as a guide to it. Children readily learn to speak true and proper English by daily use and imitation of others long before they are able to apprehend a definition of what grammar is."

This shows that Hoole thought quite like modern educators concerning grammar; yet it is but a short time since teachers have been heard to ask pupils, "Why do we study grammar?" and to receive the reply, "So we may speak and write the English language correctly."

Hoole wrote several educational works, among them was one entitled, "A New Way of the Old Art of Keeping School." In 1658 he translated the "Orbis Pictus,' of John Comenius, introducing it with a thoughtful preface, and entirely endorsing the method employed in the book. This work of Comenius was a most popular school book for over a century; it was the first picture book ever made for children; it is a sort of cyclopedia. Comenius insisted that the teaching of words and things must go together; so he put a picture of an object at the head of a page and then described it in the common tongue and in Latin. This work of Comenius had an extraordinary influence on the educators of the seventeenth century and especially on Hoole.

He believed teachers should be trained and proceed according to certain just principles. He says they must attempt to understand the child's mind and manner of working, something like the child study of to-day. " Proceed orderly and plainly from what the child knoweth already to what doth necessarily follow thereupon." This has become in the language of to-day, " Proceed from the known to the unknown." As to government, " He must not be too passionate if he do amiss."

He advocated the establishment of a free primary school in every ward in London (he had removed to London and opened a school), also a school in every town or country village, and especially the employment of properly qualified men rather than the poor "dames" who went into it from dire necessity.

While the ideas of Hoole are now universally practiced yet in his day they were genuine discoveries. Like Pestalozzi and Froebel he was a thinker and leader in the educational field.

Questions.

About what time did Charles Hoole live ?

What books did he write ?

What ground does he take respecting grammar ?

How does he say children learn to speak their native tongue correctly ?

Describe his connection with Comenius ? The "Orbis Pictus" ?

Who was Comenius ? Describe the book.

What did Hoole recommend as to schools and teachers ?

What connects him with the present child study ?

In what does Hoole seem to have been a forerunner of Pestalozzi ?

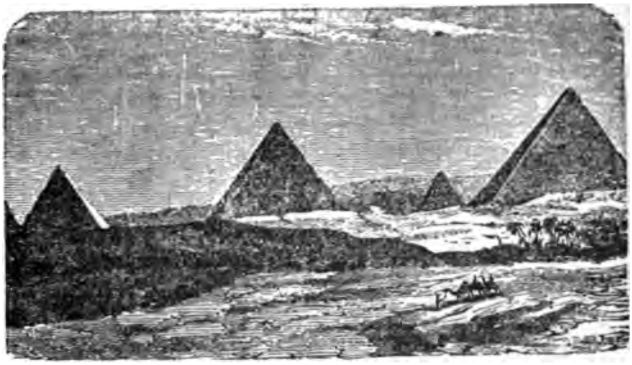
History of Art.

Egyptian Art.

(Adapted from K. Goepel's "History of Art.")

By Francis C. Turner.

THERE is no country in the world whose history has excited such profound interest as Egypt. Amid the darkness that envelops the early history of mankind the life of the people of the Nile valley stands out like a beacon and casts a flood of light from the dim vistas of the past. At a time when the inhabitants of Europe had not yet learned the use of metals, the Egyptians were erecting monuments which have been the admiration of all succeeding ages. It is indeed not to be wondered at that this has been so; nowhere has man lived under more favorable conditions for rapid development. "Egypt," says Herodotus, "is the gift of the Nile." The floods of other rivers are occasional, violent, and destructive; those of the Nile occur regularly every year almost on the same day: the waters rise gradually to a height of from twenty-five to thirty feet above the ordinary level,



and then as gradually retire, leaving the land saturated with moisture and overspreading it with a thin layer of rich and fertile soil. The lightest plow is sufficient to its tillage, and with scarcely an effort the Egyptian is ensured a rich and plenteous harvest. But while his subsistence is secured thus easily, he is taught to rely on a regular and calculable natural phenomenon to secure the full benefits of which requires the exercise of considerable forethought and ingenuity.

Thus the Nile first taught men to cope with the forces of nature and turn them to his profit. On the other hand, he had a terrible and destructive enemy constantly threatening him; the land that was given him by the Nile was wrested from him by the desert. He was a constant witness of the contest between the river and the sandstorm; between the power of good and the power of evil. Thus while his material wants were easily supplied his intellectual energies were called into play, and his religious emotions profoundly excited. "The Egyptians," says Herodotus, "are very religious, and surpass all after men in the worship they render to the gods."

A clear and full description of the religion of Egypt has never yet been written. The subject is one of great difficulty; during the forty or fifty centuries over which the records of Egyptian history are spread, many changes and much progress must have been made in the religious conceptions of the race, and at all times the religion held by the cultured sages of the priestly class must have differed widely from the primitive belief of the mass of the people. Looking at the highest form which religion took under the eighteenth and nineteenth dynasties, we seem to find the conception of unity of cause and unity of vital principle; for these philosophers, the innumerable gods of the Egyptian Pantheon are but special manifestations of this great unity. But in practice the religion was frankly polytheistic, the mass of the people never rose above the conception of personal, corporeal, and begotten gods; and this limitation was confirmed by the artistic instincts which have ever succeeded, in spite of all declarations of the Bible and the Church, in embodying Jehovah in the form of a venerable old man. For the Egyptians there was no such struggle. The Egyptian peasant was only one stage removed from fetichism: while the priests of Thebes and Heliopolis worshipped the supreme power under the names of Ammon-Rhâ, Osiris, and Horus, the lower people, tho acknowledging and paying public honors to these names, lavished their worship on the sacred animals, the bulls Apis and Mnevis, the cat and the goat, the ibis and the vulture. It is true these animals were regarded by Egyptian theology as symbols of the gods, but that symbolism is now generally supposed to be the result of the more primitive worship of those things and animals that were useful to man.

To the present day the Egyptian fellah retains something of the primitive feeling with regard to birds. Ask a fellah why he allows himself to be besieged and deafened by the birds, why he endures patiently the insolence of the magpie who perches on the horn of his ox or the hump of his camel, or roosts in flocks on the date trees and knocks down the fruit, he will say nothing. All license is given to the bird. Older than the pyramids, he is the original inhabitant of the country; man is there only thru his help; he could not exist there without the persistent labor of the ibis, the stork, the hawk, and the vulture. The crocodile, the scavenger of the river, claimed and received a similar respect.

This side of the Egyptian religion exercised a great influence on art. When the Egyptian sculptor wished to personify his god, he combined the animal's head with the human body, and produced a symbolic image which could be recognized at a glance: the hawk's head symbolizes Horus; the ibis, Thoth; the cat, Sekhet; the cow, Isis-Hathor; or, reversing the combination, the lion-bodied Sphinx is the sun-god Ammon-Rhâ. The delicacy and refinement of character which the Greek artist found necessary to distinguish Phœbus from Dionysus, Aphrodite from Artemis, and in which he was so successful that we can say of a mere fragment of statue whether it belonged to a Zeus or an Ares, was wanting here. It can no longer be said that this refinement is not found because the Egyptian artist had not the skill to give it. In the sculpture of the ancient empire we find a very high degree of realism is attained. The wooden and limestone statues in the museum of Boulaq show nothing of the conventional simplicity of form, and the calm dignity which we find in the later work with which we are most familiar. Nothing in Greek or modern art surpasses the figure of a Scribe, now in the Louvre, in vigor or intensity of expression. The scribe is seated with his legs crossed, a common oriental attitude; he is looking up at the speaker with keen eyes and profound attention. His shoulders are high and square, the muscles of his chest are highly developed, his arms are free and not attached to his sides. The marvelous realism of the face is greatly due to the ingenious structure of the eyes, which are made of rock-crystal pupils imbedded in white quartz, and a small metallic button in the middle. This work probably belongs to the sixth dynasty, and many other examples are to be found in the museum at Boulaq,—indeed the sculpture of the ancient empire, tho often rude and ungraceful, is characterized by a frank realism and truth to nature that simply astounds us, accustomed as we are to the conventionalism of the later monarchy.

Our first visit must be to Gizeh, the titanic burial ground of the ancient kings. These mighty pyramids and the colossal Sphinx which guard them on the east have been the wonder of the world since the old Greek traveler described them. How were they made? They are built of blocks of stone so huge that it would try the resources of the most skilful engineers of the present to convey them from the quarry and raise them into position. What was their purpose? That they are tombs we know; but what was the idea of the Egyptian in building tombs so vast? This problem has been studied and discussed over and over again; measurements have been taken, and men have thought to find in the structure of the pyramids the embodiment of all the wisdom of the Egyptians. The accuracy of astronomical observation incorporated in the great pyramid is undoubted, its orientation is wonderfully exact, and it appears itself to have been used as a transit instrument for astronomical observations. But what concerns us here more particularly is to understand why it is that so much labor was bestowed upon the dead.

The belief in a life after death was universal among the Egyptians. They appear to have held that when a man died, that which survived him was his Kâ or double, a second copy of the body in less dense but colored matter exactly like the original and subject to the same material conditions. For this being a home had to be provided, and food supplied at regular intervals. A tomb therefore in Egypt was no mere resting-place for the corpse, but the eternal dwelling for that which could not die.

This conception of the double was not confined to Egypt: the Eidolon of the Greek lingered around the spot where lay the unburied corpse; and even after he had gone to his home among the dwellings of the dead, remained in close relation with the living, receiving draughts of blood and wine, which restored him to a kind of temporary consciousness. The arms and food buried with the dead among most primitive peoples, the Hindoo custom of Suttee, and holocausts of human victims, wives and servants, at the funerals of primitive Greek heroes, indicate the same belief. The man who had been great in this world should not be without servants to wait upon him in the next. The Egyptians, at the earliest time that we know them, were too civilized and humane to practice such barbarous rites; instead of massacring the servants, they painted portraits of them on the walls of the tomb, engaged in all the occupations of daily life; they painted, too, those necessaries of life which the descendants should actually supply, for fear that some accident might stop the pious custom. It is thus that we find the walls of the tombs covered with representations of scenes from the daily life of the people, and that we find within the tombs countless objects of personal property and figures in enameled terra cotta of mummies.

The same ideas gave rise to the art of statuary. It was possible that the corpse might by some evil chance be destroyed and then the Kâ would have no material form to which to attach itself; but a statue of granite was almost imperishable, and with several granite statues this danger could be minimized. But every care should be taken that the corpse should be preserved. It was embalmed with such wonderful skill that mummies which have been opened in Egypt at the present day have seemed to have undergone no decay. In that rainless region raised above the flood level in the rocky caves and valleys of the bordering mountains, which lie towards the setting sun, the conditions were favorable for the preservation. Robbery was the only remaining danger, and this was guarded against by all possible ingenuities of construction.

But it is not from the pyramids that we learn all this; tho they are at first sight the most imposing, and are often the only tombs of ancient Egypt that the Englishman who visits Cairo sees, they are by no means the best *examples* of the funeral architecture of the early dynasties. These pyramids of Gizeh form but a small part of the vast necropolis of Memphis. The majority are rectangular flat-topped buildings, with walls sloping inwards, plain on the outside, but containing chambers generally ornamented within. The outer walls are of brick or faced stone, but the mass of the building is filled in with rubble. One or more chambers are entered from without; these were open to the public and contained a tablet with votive inscriptions, at the head of which generally appeared this formula: "Offering to Osiris (or some other god), that he may give provision of bread, liquid, oxen, geese, milk, wine, beer, clothing, perfumes, and all good and pure things on which the gods subsist, to the double of N. the son of M." In the center of the chamber was a table for offerings; besides these, there were generally several other chambers to which there was no access from without (Serdabs), and in these were placed the statues of the deceased. The serdabs contained no ornamentation nor any inscriptions, except those upon the statues themselves.

But so far we have not arrived at the tomb itself, the actual depository of the corpse. To find this we mount on the roof, to which there is no approach by stairs either from within or without. Here in the middle of the mass of the building we find a rectangular well at least forty, and sometimes as much as eighty feet deep, at the bottom of which is a crooked passage leading into the mortuary chamber. The mouth of the well was usually carefully sealed with slabs of stone, so as to exactly resemble the rest of the roof or floor of the building. In the chamber we discover a splendidly ornamented sarcophagus of black basalt; but the remains of the corpse that we find within show that in those early days the art of embalming was only imperfectly understood, and hence the necessity for these elaborate contrivances for the preservation of the corpse or its images. When once the corpse was placed and shut in the sarcophagus, and the necessaries and provision for the dead put in its funeral chamber, the passage at the bottom of the well was bricked up, the well itself filled up with stones, and its mouth made undistinguishable from the rest of the roof. These *mastaba* are then the tombs of private persons in the great Memphitic necropolis.

We can now pass to the mighty royal tombs which form the overpowering attraction of Gizeh. "For the pyramids are tombs, massive, solid; tombs without windows, without doors, without external openings. They are the gigantic and ever impenetrable envelope of a mummy." (MARIETTE.) The pyramid contains two parts only of the more complete tomb, the well and the mortuary chamber; the third, the chapel, could not well be constructed in the solid pile of masonry, it would have been crushed by the weight of the superincumbent mass. The chapel was therefore separated from the tomb, and has in most cases disappeared, tho its ruins are traceable on the eastern side of the pyramids of Cephren and Mycerinus; but the temple was very small compared to the pyramid.

Whether either temple or pyramid contained serdabs is as yet a doubtful question; the temples are in far too ruined a condition to answer the question; the pyramids may contain countless chambers which have as yet been undiscovered. M. Maspero believes that he has found a serdab in the pyramid of King Dunas of the fifth dynasty.

The appearance of Gizeh to-day is far different from that which it presented in the days of Herodotus. The surface of the pyramid, instead of showing the blocks of which it is formed ranged in steps one above the other, presented a polished surface, so that it looked as if it were carved out of one block of stone. The facing was probably of syenite and other differently colored granite arranged in bands, so that it presented an appearance similar to that of the campanile of Giotto.

The pyramids stood on a vast paved platform surrounded by a massive wall, and were approached by those broad smooth avenues built of vast blocks of stone, which excited the wonder and admiration of Herodotus, and which, after being used without yielding for the transport of the huge masses of material, formed worthy approaches to the necropolis for royal funerals and the constant stream of visitors.

At the entrance to the cemetery facing east stood the huge sphinx, carved out of a single rock, seventy feet high, the image of Harmachis, the rising sun, the motionless and eternal guardian of this vast cemetery, the per sonification of the resurrection, of that life which like the morning light is ever renewed, is ever triumphing over darkness and night. The whole body is now buried beneath the sand, and the head, which alone is visible, has been disfigured and mutilated, so that the smile on its calm and serene face is scarcely traceable.

There is a break in the monumental records as at present known between the sixth and the twelfth dynasties. Under the first Theban Empire began the custom of burying in caves in the sides of the mountains which fringed the valley. There is indeed a cemetery belonging to this time at Abydos, but that seems to have been due to the specially sacred character of the place, its close association with Osiris, and the traditional proximity of the cleft thru which the sun daily descended on his nightly pilgrimage. There are indeed scarcely any remains of this necropolis; its tombs, according to Mariette, consisted of small pyramids of brick containing two chambers.

The caves of Beni-Hassan are of much greater interest, and deserve something more than a flying visit. At the entrance and within the chambers we find the earliest examples of columns used to support lintel and roof. These primitive columns are often spoken of as being the type which suggested the Doric order; they are generally polygonal without capitals; the square abacus at the top is part of the monolith and is not independent, showing that this is a development from the square pillar. But in the tombs of Beni-Hassan we also find true columns with rounded surface and capitals of that lotus form which during the latter Theban Empire became the principal type of Egyptian columns. In these tombs there was none of the skilful concealment of their treasures such as we find at Memphis, and they were therefore early despoiled; no statues, no treasures of any sort, have been found there in recent times. But there remain the walls with their pictures and inscriptions, pictures like those at Memphis, of the daily life and occupations of the people, as well as scenes from the personal history of the individual; these have only suffered at the hands of the modern European tourist.

Here then is another volume of history in which we can read the life of the Egyptian people.

The custom of burying in caves seems to have gained rather than lost favor as time went on. After the obscure period of the Hycsos occupation, we find cave burial adopted by the monarchs of the later Theban Empire. To visit the royal tombs of the eighteenth, nineteenth, and twentieth dynasties, we must cross the river and ascend into a wild and somber valley of the Libyan chain, known as the Bab-el-Molouk, the 'gate of kings. "The place chosen was well-suited for its melancholy purpose, an arid valley enclosed by very lofty rocks broken into points or by mountains in full decomposition, almost all presenting broad clefts occasioned either by the heat or by internal disturbances, and whose slopes are covered with black stripes as if they had been partly *burned.* No living animal frequents this valley of death;

I do not reckon the flies, foxes, wolves, and hyenas, because it was our sojourn in the tombs and the odor of our cooking that attracted these hungry races." (CHAMPOLLION.) A valley like this was admirably adapted for the concealment of the mummy; here long passages, called by the Greeks syringes, were driven far into the rock, and these could easily be hid by a few stones and by the sand which is driven in clouds into the valley.*

The syrinx, unlike the well of the mastaba, descends at a gentle incline for sixty or a hundred yards, and terminates in a chamber where the sarcophagus is placed. The walls of these passages are often covered with reliefs, but the subjects are now different from those of the old tombs; instead of servants ploughing and reaping, baking and spinning, we have here presented the pilgrimage of the soul from this world to the next; the last judgment before the throne of Osiris, whither the soul is conducted by the goddess Mât, his heart weighed in the scales by Har and Anapu against the symbolic ostrich feather, and the sentence passed upon him recorded by Thoth upon his tablets. The monkey and pig above indicate that if the soul is weighed and found wanting, it must pass a period of punishment in the body of an animal before it meets with the second death, which is annihilation. These figures serve also to remind us that one striking feature of Egyptian art was an intense love of the grotesque.

But tho the gate of kings was a fitting burial-place, it was by no means a spot suitable for the erection of public monuments worthy of conquerors like the Thoutmes and Rameses; so they built memorial temples where the mountain descends into the plain, several of which are standing to this day at or near Medinet Abou. If we visit the Ramesseum we shall see how great is the change that has come over the Egyptian conception of immortality. This magnificent temple is not an abode for the

Kâ of the monarch, but a monument of his earthly greatness. There is of course another reason for the change

BAS-RELIEF FROM THE TEMPLE OF SETI I. AT ABYDOS, ERECTED B. C. 1500.

from the pyramids of Memphis to the temple of Medinet Abou. Altho the handiwork of the early dynasties displayed wonderful skill, and in sculpture an extraordinary perfection had been reached, the art of architectural construction was in its infancy.

The form of building which Cheops or Chephren could construct on a large scale, was one of the most primitive.

It carries us back to the period, of which no actual trace remains in Egypt, but which we find in almost all other countries, when the last honor done to a hero or king was to heap a mound of earth over his body. The pyramid is only a stone, and therefore definitely shaped, tumulus. They could move about and heap up huge stones, but they could not build temples. But during the long period that had elapsed since the days of the Memphitic Empire, the art of construction by column and architrave had been developed. In the caves at Beni-Hassan we already met with columns, and even the beginning of orders, and between that time and the days of the eighteenth dynasty, Egyptian architecture developed till it reached its culmination in the temples of Karnak and Luxor. The steps of this development have not yet been accurately traced, for little is left us of the intermediate stage of architecture, as the kings of the later empire not only built but destroyed that they might build. Apart, therefore, from other causes, it is natural that in the funeral monuments of the Thoutmes and Rameses the highest efforts should have been bestowed on the temple rather than on the hiding-place of the mummy.

The walls and columns of the Ramesseum are covered with illustrations of the great achievements of Rameses II. We see his colossal figure towering over his enemies, and his heavy mace dealing death among the Khetas; we see him leading them home captive; every picture that decorates the walls records his martial deeds or his grandeur and magnificence at home. Within the court we can no longer see the statue which rose to a height of more than fifty feet—it lies in fragments on the ground—but all that remains commemorates his glory. That which the Ramesseum is for Rameses II. the temple of Medinet Abou is for Rameses III.; its central subject is his victory over the peoples of the sea, one of the most important events in ancient history. But the mos striking objects in this region are the two colossal figure which stand up in majestic dignity out of the plain, an are known as the statues of Memnon. Seen from a distance during the floods in the autumn, when they rise i solitary grandeur from the waters which cover the plain and thrown into clear outline by the rays of the settin sun, they form a picture which can never be forgotten These figures are really statues of Amenophris III (eighteenth dynasty), and formerly, no doubt, fronted temple similar to those we have just seen, which forme the cenotaph of this monarch. The distance of the temple from the tomb, the importance given to the persona achievements of this monarch in the decorative pictures tho the scenes of domestic service are also found, poin to great modifications of the crude primitive belief in th double, whose personal wants were to be satisfied.

(To be concluded next month.)

National Educational Association.

BOSTON, JULY 6-10, 1903.

1. One fare (plus $2.00) for the round trip.
2. Ticket extension is to August 31.
3. There are many points of historic and literary interest in and about Boston.
4. There are many inexpensive hotels by the sea an at the mountains.

Society of Educational Research.

President, Supt. Addison B. Poland, Newark, N. J.; vice president, Supt. Charles Gorton, Yonkers, N. Y.; secretary treasurer, Ossian Lang, New York; permanent director o research, Dr. J. M. Rice, New York. Organized for specifi comparative investigations of the relative practical value o educational processes as demonstrated by the measurable results obtained at school. Maintains a bureau of research t collect data and render them available for immediate use b the teaching profession. Membership, $3.00 per annum *Address* the secretary at 61 East Ninth Street, New York

Teachers' Examinations.

New York State Uniform Examinations for Commissioners' Certificate.

(January 8 and 9, 1903.)

HISTORY OF EDUCATION.

1. *a.* What was the effect of the crusades upon the dissemination of knowledge? *b.* How was this brought about?

2. *a.* Of what were the early universities the outgrowth? *b.* What was generally true of them as to range of studies?

3. *a.* In what order did Fenelon advise taking up the study of languages? *b.* What was his most important educational work?

4. What did Locke hold to be the purpose of *a.* physical education; *b.* intellectual education; *c.* moral education?

5. What was the effect of Jesuit schools upon *a.* authorship; *b.* missionary enterprise; *c.* training of teachers?

6. What was the theory of Luther regarding the training of *a.* clergymen; *b.* teachers?

7. What was the effect of humanism upon *a.* liberty of thought; *b.* the study of the classics; *c.* courses of study?

8. What was the teaching of Erasmus regarding *a.* the home training of children; *b.* religious instruction?

9. Give an account of the relations between Alcuin of England and Charlemagne?

10. What was the central thought of Plato's scheme for public education?

ANSWERS.

1. *a.* They exercised a greater influence to advance civilization during the Middle Ages than any other cause. *b.* Crusades were undertaken to rescue the Holy Sepulcher from the Mohammedans. They enlarged the sphere of knowledge; introduced foreign customs, sciences, and arts; infused new life into Europe; and aroused the people to physical, mental, and religious activity. They led to the establishment of schools and universities.

2. *a.* Of the scholastic influence and newly-awakened scientific spirit, which caused free associations of men held together by mutual interest in science. *b.* There were four divisions,—philosophy, theology, medicine, and

law, but the number of studies in each subject was limited.

3. *a.* First the mother tongue, then the other living languages, lastly the classics. *b.* "The Education of Girls."

4. *a.* To harden the body and produce "a sound mind in a sound body." *b.* Practical utility. *c.* To produce "virtue, prudence, and good manners."

5. *a.* They stimulated authorship; were *b.* zealous in the propagation of their principles, and *c.* taught the necessity of trained teachers.

6. *a.* Every clergyman must have pedagogical training and experience in teaching before entering upon a pastorate. *b.* Teachers must be trained, and in that training singing is included.

7. *a.* It laid the foundation for future liberty of thought; *b.* revived the study of classics; and *c.* made courses of study more practical.

8. *a.* The foundation of all training of children must be laid in the home, and parents should know what they ought to be taught. *b.* Religious instruction must not be neglected.

10. Man belongs to the state and the main purpose of education is to fit him to serve the state.

PHYSICS.

1. *a.* What is a machine? *b.* Explain the working of a device for decreasing the friction of the wheels of a bicycle.

2. Define *a.* tenacity; *b.* elasticity; *c.* hardness; *d.* brittleness.

3. *a.* What causes an object to appear white? *b.* Name two colors that are complementary.

4. *a.* How may a piece of soft iron be made a magnet? *b.* Would it be a temporary or a permanent magnet?

5. Why does water sprinkled on the floor in hot weather cool the air of the room?

6. *a.* Give the names of the two different kinds of lamps used in electric lighting. *b.* Explain by the aid of a diagram the general construction of one.

7. Explain how an echo is caused.

8. Describe by the aid of drawings the capillarity of water and of mercury in glass tubes.

9. Name and describe the three states of equilibrium.

10. What is the height of a cliff if it takes three seconds for a stone to fall from its top to its base?

ANSWERS.

1. *a.* A machine is an instrument for the conversion of

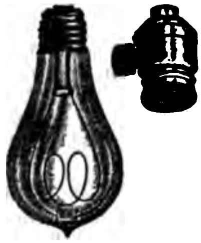
motion or the transference of energy. *b.* Near both ends of the hub are grooves both in hub and axle, forming a cylindrical space into which are placed several hard metal balls smoothly polished, upon which the weight rests; the points of contact are thus made less, and less friction results.

2. *a.* Tenacity is that property of matter by virtue of which some bodies resist a force tending to pull their particles asunder. *b.* Elasticity is that property of matter by virtue of which bodies resume their original form or size when that form or size has been changed by any external force. *c.* Hardness is that property of matter by virtue of which some bodies resist any attempt to force a passage between their particles. *d.* Brittleness is that property of some matter which causes it to be easily broken by a blow.

3. *a.* When a body reflects much light and absorbs little, reflecting the colors in like proportions, the color is white; b. red and blue-green; orange and light blue.

4. *a.* By winding a wire about it and passing an electric current thru the wire. *b.* Temporary.

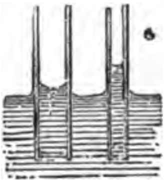
5. Water sprinkled on the floor evaporates, thus absorbing heat. This is taken from the atmosphere, which is thus made cooler.



6. *a.* Arc lights and incandescent lamps. *b.* In the incandescent lamp shown, the current passes thru the filament shown by the curved line, making it incandescent and thus giving light.

7. An echo is a sound repeated by reflection or bounding back from a wall or some similar surface, so as to be heard again at its source.

8. The capillarity of water is caused by the great adhesion of solid and liquid; thus we have capillary ascension, as in the figure. The capillarity of mercury shows itself as capillary depression, exactly opposite from that in the figure, because cohesion within the liquid is stronger than the adhesion between the solid and the liquid.



9. Stable, unstable, and neutral. A body is in stable equilibrium when the center of gravity is below the point of support, or where any movement tends to raise the center of gravity. A body is in unstable equilibrium when the center of gravity

is above the point of support, or when any movement tends to lower the center of gravity. A body is said to be in neutral equilibrium when the center of gravity is at the point of support, or when any movement tends neither to elevate nor lower the center of gravity.

10. 144 feet.

BOOKKEEPING.

Memoranda of wholesale grocery business conducted by ....(Name of person taking this examination,) Binghamton, N. Y., Jan. 2, 1903, I opened business with the following resources: Cash $2,300, Merchandise inventory $4,960.

Jan. 2. Paid one month's rent $75, sold R. J. Lake on account 20 barrels, 6,170 pounds, sugar at 5 cents per pound; 10 chests, 625 pounds, tea, at 40 cents per pound. Sold H. J. Fenton for cash 25 barrels, 8,000 pounds, sugar at 5 cents per pound.

Jan. 3. Bought of L. H. Streamer 25 chests 1,520 pounds, tea at 35 cents per pound and gave in payment of one-half the amount my note for thirty days, balance on account. Sold H. P. Day 15 chests, 900 pounds, tea, at 40 cents per pound; 10 boxes, 625 pounds, cheese at 8 cents per pound. Received in part payment cash $100, balance charged to account.

Jan. 5. Sold Parker and Coates 10 chests, 600 pounds, tea at 42 cents per pound; 25 barrels, 7,880 pounds, sugar at 5½ cents per pound; 4 boxes, 250 pounds, cheese, at 8½ cents per pound. Received in part payment a check on Susquehanna Valley Bank for $450, balance charged to account Received of R. J. Lake cash on account $400. Paid clerk $12. Paid insurance and sundry expenses $115.50.

Jan. 6. Bought for cash, of Becker & Co. 21 boxes 1,300 pounds, cheese at 6½ cents per pound. Sold George Robinson on account 20 boxes, 1,250 pounds cheese at 8 cents per pound; 40 barrels, 12,680 pounds, sugar at 4¾ cents per pound. Paid freight and cartage $75. Inventory at close of four days business shows merchandise on hand $3,058.

1-3 Enter above transaction in books of original entry.

4. Post accounts.

5. Balance the cash-book and all ledger accounts.

6-7. Make a formal statement of the condition of your business on the sixth day of January showing resources and liabilities, loss or gain and net capital.

8. Make an invoice of goods sold to Parker & Coates on Jan. 5.

9. Write the note mentioned in transaction of Jan. 3.

10 *a*. What is meant by "commercial paper?" *b*. Mention three kinds of commercial paper.

ANSWERS.

1-5. DAY BOOK.

BINGHAMTON, N. Y., January 2, 1903.

JAMES WALTERS *Cr.*				
Mdse. (Inventory)...........................	4960	00		
—2—				
R. J. LAKE *Dr.*				
20 bbls., 6170 lbs. sugar @5c....308.50				
10 chests, 625 lbs., tea @ 40c....250.00	558	50		
—3—				
L. H. STREAMER *Cr.*				
25 chests, 1520 lbs, tea @ 35c...........			532	00
Dr.				
To bills payable, 30 days..................	266	00		
—3—				
H. P. DAY *Dr.*				
15 chests, 900 lbs., tea @ 40c....360.00				
10 boxes, 625 lbs., cheese @ 8c.. 50.00	410	00		
—5—				
PARKER & COATES *Dr.*				
10 chests, 600 lbs., tea @ 42c....252.00				
25 bbls., 7880 lbs., sugar @ 5½c. 433.40				
4 boxes, 250 lbs., cheese @ 8½c.. 21.25	706	65		
—6—				
GEO. ROBINSON *Dr.*				
20 boxes, 1250 lbs., cheese @ 8c. 100.00				
40 bbls., 12680 lbs., sugar @ 4¾c. 602.30	702	30		
Inventory shows merchandise on hand..			3058	00

Dr. JAMES WALTERS *Cr.*

Jan.	6	Loss & gain...		18	55	Jan.	2	Mdse...........	1	4960	00
	6	Present worth		7241	45		2	Cash............	1	2300	00
				7260	00					7260	00
							6	Present worth		7241	45

CASH BOOK

			Rec'd		Paid	
Jan.	2	James Walters, amount on hand.........	2300	00		
		Paid for rent.................................			75	00
		Rec'd of H. J. Fenton, 25 bbls. sugar, 8000 lbs., @ 5c...............................	400	00		
	3	Rec'd of H. P. Day, on acc't...............	100	00		
	5	Rec'd of Parker & Coates, on acc't.......	450	00		
		Rec'd of R. J. Lake, on acc't..............	400	00		
		Paid clerk, expense............................			12	00
		Paid insurance and sundry expenses.....			115	50
	6	Paid Becker & Co., 21 boxes, 1300 lbs., cheese @ 6½c..............................			84	50
		Paid freight and cartage........................			75	00
		Balance on hand................................			3288	00
			3650	00	3650	00
		Balance.....................	3288	00		

MERCHANDISE.

Jan.	2			4960	00	Jan.	2			558	50
	3			532	00		2			400	00
	6			84	50		3			410	00
	6	Loss & gain...		258	95		5			706	65
							6			702	30
							6	(Inventory).		3058	00
				5835	45					5835	45

EXPENSE.

Jan.	2			75	00	Jan.	6	Loss & gain......		277	50
	5			12	00						
				115	50						
	6			75	00						
				277	50					277	50

R. J. Lake.

Jan.	2			558	50	Jan.	5			400	
							6	Balance......		158	50
				558	50					558	50
		Bal. forward..		158	50						

Bills Payable.

Jan.	6	Balance....		266	00	Jan.	3	L. H. Streamer, on acc't, 30 days.....		266	00
							7	Balance........		266	00

L. H. Streamer.

Jan.	3	Bills payable		266	00	Jan.	3	Mdse...		532	00
		Balance......		266	00						
								Balance......		266	00

H. P. Day.

Jan.	3			310	00	Jan.	6	Balance.......		310	00
	7	Balance......		310	00						

Parker & Coates.

Jan.	5			256	65	Jan.	6	Balance......		256	65
	7	Balance.......		256	65						

GEO. ROBINSON.

Jan.	6			702	30	Jan.	6	Balance......		702	30
	7	Balance......		702	30						

LOSS AND GAIN.

Jan.	6	Expense...		277	50	Jan.	6	Mdse............		258	95
							7	Net loss.........		18	55
				277	50					277	50

6-7. BALANCE SHEET, January 6, 1903.

James Walters.........			7260									
Cash..................	3650		362						3288			
Merchandise............	5576	50	2777	45			258	95	3058			
Expense...............	277	50			277	50						
R. J. Lake............	558	50	400						158	50		
Bills Payable..........			266								266	
L. H. Streamer.........			266								266	
H. P. Day.............	310								310			
Parker & Coates........	256	65							256	65		
Geo. Robinson.........	702	30										
	11331	45	11331	45	277	50	258	95	7773	45	532	
Jas. Walter's net loss...							18	55				
					277	50	277	50				
Jas. Walter's net credit.			7260									
" " net loss...			18	55								
" " pres't worth											7241	45
									7773	45	7773	45

8. **Binghamton, N. Y., January 3, 1903.**

Parker & Coates, *Dr.*

_To_ James Walters.

	To 10 chests tea, 600 lbs., @ 42c per lb...	$252	00		
	To 25 bbls., 7880 lbs., sugar @ 5½c per lb..	433	40		
	To 4 boxes, 250 lbs., cheese @ 8½c per lb.	21	25	$706	65
	Rec'd in part payment check on Susquehanna Valley Bank..........................			450	00
	Balance due.			256	65

SCHOOL LAW.

1. *a.* What officer has authority to condemn a school-house? *b.* When a school-house has been condemned, what action should the trustees take?

2. When a district contracts with another district for the instruction of its pupils, for what two purposes may the district quota be used?

3. If truants are sent to a truant school what provision is made for meeting the expense in case of *a.* a common school district; *b.* a village employing a superintendent?

4. *a.* What is meant by "qualified" teacher? *b.* What is the provision of law in regard to paying a teacher who is not qualified?

5. Name two causes for which the state superintendent may withhold the whole or part of the public money from any district.

6. What is *a.* the maximum and *b.* the minimum limit of the term of a trustee's contract with a teacher for a common school district.

7. Name the officers who are chosen at a meeting of a common school district.

8. If a school flag or flagstaff is destroyed, who must see that it is replaced? How may the necessary funds be raised?

9. For what cause and after what preliminary course may a school commissioner annul a teacher's certificate?

10. Name three duties of town clerks pertaining to schools.

ANSWERS.

1. *a.* The school commissioner. *b.* Call a special meeting to consider the question of rebuilding.

2. For the tuition and for conveying the children to th school.
3. *a.* It is a county charge; *b.* it is a village charge.
4. *a.* One holding a certificate to teach granted by a authority established by statute. *b.* Such a teacher canno be paid out of public money.
5. He may withhold half the public money for neglecting to obey the compulsory act, and all of it for neglecting t close during institute, or failing to provide suitable outhouses.
6. *a.* One year; *b.* 10 weeks.
7. Trustee, clerk, collector; and if so voted by the district a treasurer.
8. The trustee. By tax.
9. For immorality, after a hearing.
10. Keep the records, receive the trustees' reports an deliver them to the commissioner, and furnish the commissioner with the names and addresses of the district officers.

READING.

Oh, why should the spirit of mortal be proud?
Like a swift-fleeting meteor, a fast-flying cloud,
A flash of the lightning, a break of the wave,
Man passes from life to his rest in the grave.

The leaves of the oak and the willow shall fade,
Be scattered around and together be laid;
And the young and the old, and the low and the high
Shall molder to dust and together shall lie.

— *William Knox.*

1. Copy the poem above and mark for inflection *a.* *prou* and *lightning* in the first stanza; *b.* *fade, low* and *high* in th second stanza. *c.* Give reason for each mark used.
2. Mark for emphasis the second stanza in No. 1.
3. Select from the first stanza a figurative expression an state what particular purpose it serves.
4. What is the central thought of the second stanza?
5. Name three books, other than school readers, suitabl for supplemental reading in the eighth grade. Name th author of each and state the particular benefit to be derive from each.

ANSWERS.

1. Oh, why should the spirit of mortal be proud`?
Like a swift-fleeting meteor, a fast-flying cloud,

a. A flash of the lightningˏ, a break of the wave,
Man passes from life to his rest in the grave.

The leaves of the oak and the willow shall fadeˋ,
Be scattered around and together be laid;
b. And the young and the old, and the low′ and the highˋ
Shall molder to dust and together shall lie.

c. *Proud*, falling inflection because it is the last word of an indirect question; *lightning*, rising inflection because it marks the pause of suspension, denoting that the sense is incomplete; *fade*, falling inflection, because it best expresses the solemnity of the thought; *low*, rising inflection, *high*, the falling, because antithetic terms usually take opposite inflections; the former has the *rising*, the latter the *falling*.

2. The leaves of the *oak* and the *willow* shall *fade*,
Be scattered around and *together* be laid;
And the *young* and the *old* and the *low* and the *high*,
Shall molder to dust and *together* shall lie.

3. Like a swift-fleeting meteor, a fast-flying cloud, a flash of the lightning, a break of the wave—is a figurative expression used to show how *instantaneously* death may come.

4. That death is no respector of persons; that there are no class distinctions in the grave.

5. Answers will vary. *Last of the Mohicans*, *The Pilot*, or *The Spy*, by Cooper, are valuable for the history they contain as well as for the general literary value. *Evangeline*, by Henry Longfellow, is of great value for its literary merit, for its historical setting, and as a delightful introduction into the wider realms of literature. *Birds and Bees*, by Burrows, is valuable as a nature study.

PHYSIOLOGY AND HYGIENE.

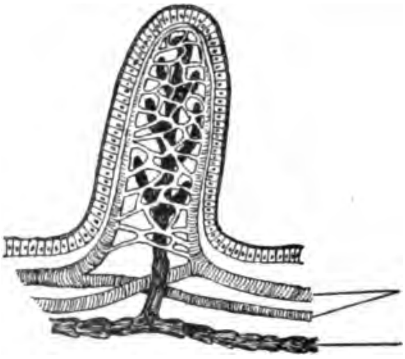
1. What is the function of the villi of the small intestines?
2. Describe the bones as to their *a.* covering; *b.* internal structure; *c.* composition.
3. When a muscle contracts what is the effect upon itself? Upon the bones to which it is attached?
4. Describe the portal circulation of the blood.
5. Explain what a cold is and state why it usually results from a sudden chilling of the whole or a part of the surface of the body.
6. Give *a.* the names of the different kinds of teeth in the permanent set; *b.* the number of each kind.
7. Describe the action of the esophagus.

8. What harmful effects does the excessive use of tobacco have *a.* upon the heart; *b.* upon the nerves?

9. What part of the body is directly affected by *a.* appendicitis; *b.* pleurisy; *c.* bronchitis?

10. *a.* What is the function of the middle ear? *b.* Describe its anatomy.

ANSWERS.



VILLI.

1. The chief function of the villi of the small intestines is to offer a large surface for the absorption of digested food-stuff.

2. *a.* A bone is covered externally by the periosteum, a dense, vascular membrane. *b.* Next the periosteum comes a layer of compact bone. This layer of compact bone immediately surrounds a large marrow-cavity in the shafts of long bones but in other areas the central region of the bone is filled out by a spongy framework of bone in the meshes of which marrow is contained. *c.* Bone contains of mineral matter, 66%; and of animal matter, 34%. The chief salts are calcium phosphate and calcium carbonate.

3. The muscle becomes shorter and thicker. The regions of the bones to which the tendons of the muscle are attached are brought nearer together.

4. From the spleen, stomach, and intestines blood is carried by the portal veins to the liver. Within the liver it passes thru capillaries into the hepatic veins and thence to the heart.

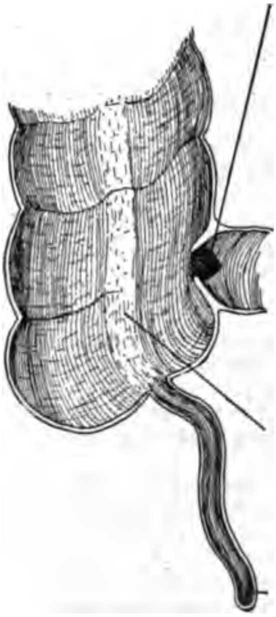
5. A "cold" is an acute inflammation of the air passages, due probably to a micro-organism. That it often follows a chilling of the blood seems to be due to some nervous, vasomotor reaction, not clearly understood, which makes the air passages unusually susceptible to the organism.

6. On each side of each jaw there are 2 incisors, 1 canine, 2 bicuspids, and 3 molars.

7. By peri-staltic action the esophagus conveys food from the pharynx to the stomach.

8. Tobacco is apt to cause the heart to be irregular in its action. Tobacco often has a bad effect upon the nervous system, giving rise to various functional disturbances. Of these the most serious, perhaps, is blindness.

9. *a*. The vermiform appendix, A, of the intestines. *b*. The membrane lining the cavities containing the lungs. *c*. The Bronchi.



See Answer No. 9.

See Answer No. 10.

10. The chief function of the middle ear is to convey sound-(A) waves from the ear-drum, A to the internal ear. The middle ear is a disk-shaped cavity in the temporal bone. Thru the eustachian tube, B, it is connected with the pharynx. On the outer side the ear-drum separates the middle ear from the inner end of the auditory canal. Against (C) the

drum is fastened an arm of a small bone, the *malleus*. The malleus articulates with the *incus* and this in turn with the *stapes*. The stapes is a small bone resting against a membrane which covers over the oval foramen, C, in the bony wall between the middle and the internal ear. Waves of air impart movement to the ear-drum, this sets the chain of bones in motion and they in turn (B) thru the stapes move the membrane of the oval foramen to and fro. This sets up waves of motion in the fluids of the internal ear.

METHODS AND SCHOOL MANAGEMENT.

1. *a*. State the advantage that may be derived from a knowledge of the rules of spelling. *b*. Give two illustrations.

Give your views regarding corporal punishment in school and your reasons for such views.

3. After the examination papers of pupils are marked, should they be returned to the pupils? Give reason for your answer.

4. Name some book, either of travel or fiction, treating of the habits and customs of a people and show how it could be utilized in *a*. language lessons; *b*. geography lessons.

5. What produces intellectual growth and determines its character?

6. In teaching history which purpose is the more important, *a*. acquisition of facts by the pupils, or *b*. the love of historical reading? Give reasons for your answer.

7. What should be the nature and extent of the preparation for the reading lesson made by a pupil in a grammar grade?

8. Which is the more important, the method or the personality of the teacher? Give reason for your answer.

9. Give *a*. some of the advantages of the Grube method in number; *b*. some of the disadvantages.

10. When the pupil begins his school life it is desirable—that he should learn to love to go to school, love to work, form the habit of punctuality, be courteous to his associates, make good progress in his studies, be neat in his person and with his work. Arrange these things in the order of their importance and give reasons for the arrangement.

ANSWERS.

1. It is an advantage in a few cases, as it saves confusion in the spelling of certain words, i. e., forming the plural of *nouns*. Money—moneys, policy—policies —A——A's,

a. The grouping of words under rules and exceptious, if not carried too far, must, on the principles of association, or of comparison and contrast, be a great aid to the memory. *b.* That in the diphthong *ei* or *ie* the *e* comes first if it follows *c*; otherwise the *i*. Thus *receive, siege.* So in the formation of the plurals of nouns, as above, a pupil knowing the rules cannot spell policy—p—o—l—i—c—y—s, because he spells moneys, m—o—n—e—y—s. The rules for joining suffixes to *y* and *e*, as, senate—senator. When a termination beginning with a vowel is added to a word ending with silent *e*, the *e* is dropped.

2. The teacher's first duty is to maintain order. If he can do this without corporal punishment, glory to him; if he can not do it without a good deal of corporal punishment let him quit a business he is unfitted for.

3. No. The English language admits of so many shades of meaning that the pupils have the idea that any answer bordering on truth should be accepted, and if papers are returned teachers have to compare and criticise the marking and some teachers do not have time to hear all the complaints that will be made. It is better to use the question paper as a regular lesson, for one pupil will probably miss one and another question, so that it is a profitable exercise for the whole class.

4. The story of Japan. *a.* After the oral work of the geography class is done, if the teacher correlates her subjects she can secure a reproduction orally and in writing as a part of the English work. *b.* In geography she can have selections read; when teaching occupations, in connection with Japan, she can use the pictures; she can assign paragraphs for her pupils to read in preparing the lesson.

5. Interest in the subject at hand, accompanied by close application. Its character is determined by the subject and its value also by the wisdom of the teacher in choosing the vital points and placing them in the grasp of the pupil.

6. The love of historical reading. At the best he could acquire but a fragment of the facts of history. Facts sometimes are acquired by such a method as to stunt a pupil's desire for history. If his interest in historical reading is awakened he will have a means at hand by which he may continue to acquire facts for himself all through life, with pleasure and profit.

7. He should know how to use every word in the lesson.

He should have read the lesson silently to get the thought. He should know the allusions if there be such. He should have analyzed the reading lesson with the teacher at the last recitation period. From ⅓ to ½ of every period of recitation in grammar grades when an advanced lesson is given should be used by the teacher in preparation for the next lesson.

8. The personality. The matter of education of children is greatly a matter of imitation; therefore the personality of a teacher is always directly apparent to the child; her method can be built up better than her personality.

9. *a*. It shows the close relation between successive operations, and lessens confusion. Each number as taught depends upon the one previously taught. *b*. If carried too far it has the effect of abstract operation. The object is sometimes made too prominent.

10. (1) Learn to love to go to school because upon this depends all the others; (2) love to work; his future depends upon his love for his work; (3) learn to be punctual; business demands it; (4) be courteous to his associates; this is one of the first lessons for all mankind to learn and it is important that it be learned early at school; it is a part of character building; (5) acquire neatness in person and in work. That appearance and neatly done work command attention and secure recognition. (6) make progress in work; this depends upon the others, and if they are satisfactory the progress will be of the right kind.

History of Our Times.

In nearly all the states a knowledge of current affairs is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

(See *Our Times* for March 2 and March 16.)

Describe some features of the St. Louis fair.

Who was lately appointed a justice of the United States supreme court, and when did he first become prominent?

What are the contentions of Canada and the United States respectively as to the Alaska boundary?

What region is known as Macedonia? Describe its people. Why is it exciting the interest of the world at present?

Thru what cities does the Transcaspian railway pass? What will it do for Central Asia?

Who is the secretary of commerce? What bureaus will be included in his department?

What was the origin of the Monroe doctrine? Tell, in brief, what it is.

Where has Great Britain established a naval station on the North sea and why?

Who is Paul Laurence Dunbar and for what is he noted?

Tell the principal features of the new immigration law.

What is the purpose of The Hague tribunal?

Give a sketch of the originator of the Chautauqua system.

Describe Sheldon Jackson's work in Alaska.

Tell about the new electric light invented by Peter Cooper Hewitt.

What was Judge Grosscup's decision in regard to the meat monopoly?

Where will South Africa's observatory be located?

What was the significance of the Irish conference in Dublin?

Where did General Miles go in his trip around the world?

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Geography, 3d and 2d grades
U. S. History, 3d and 2d grades
[illegible]
Orthography and Orthoepy, [illegible] grade
Theory and Practice of Teaching, 3d, 2d, and 1st grades
Rhetoric and Composition, 1st grade
Physiology, 1st and 2d grades
Bookkeeping, 1st and 2d grades
Civil Government, 1st and 2d grades
Physical Geography, 1st grade
Astronomy, professional grade

Botany, professional grade
Physics, " "
Chemistry, " "
Geology, " "
Alcohol and its Effects on the
body
Reading
English Literature, 1st grade
Natural Philosophy
Algebra, professional grade
Geometry, " "
Latin, " "
Zoology, " "

Worth [illegible] the price.—“[illegible]” —Miss [illegible], Teacher [illegible], Cal.

Best of the Kind.—“It is decidedly the best book of the kind I [illegible] —H. H. Williams, Ex-County Superintendent, [illegible] County, Pa.

[illegible]—“It seems to be well adapted to the [illegible] [illegible]” —[illegible]

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3. In the department of Educational Classics, extracts from the [illegible] in stimulating teachers to an appreciation of [illegible]. These, too, will [illegible] with the work suggested under numbers 1 and 2.
4. In the department of Art History, representing the general culture side of the course, the series given in the present volume will be continued, and we hope [illegible] by devoting the entire year to Greek and Roman Art. Suggestions from readers of EDUCATIONAL FOUNDATIONS will be highly valued.

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Educational Foundations

Ossian H. Lang, Editor.

Vol. XIV. MAY, 1903. No. 9

There are two opposing extremes of attitude with reference to the freedom of teachers. One would sacrifice everybody and everything to "uniformity;" the other would permit full swing to the idiosyncrasies of the individual teachers. Both are, of course, in the wrong. Yet it is hard to draw the line of reason between the two. Teachers vary so much in professional fitness and experience that consciousness of conditions in localities of one's acquaintance cannot but prejudice the mind in one or the other direction. If there were to be assumed at least a certain minimum of professional equipment so that the question might turn wholly about the exercise of personality, the question would be less difficult of solution. However, let matters stand as they will; it is well to make a careful study of the propositions laid down by so vigorous and broad-minded a thinker as Mr. Gilbert, whose extensive experience in dealing with large problems of school administration entitle him to a respectful hearing. The subject is of vital interest. The foundation principles of school organization and administration are involved in it.

John Locke's influence upon educational and philosophic thought has been wonderfully constructive. Educators are beginning to recognize that the great school reform, with which the names of Basedow and Rousseau were most prominently identified, had its source in him. All this in spite of the fact that the logic of his own views concerning education aimed at an education preparing a gentleman by private tutoring to a comfortable participation in society with never a revolutionary thought anywhere. Locke's "Thoughts Concerning Education" are of surpassing importance to students of education. The selections made for the present number represent the best and most significant ideas to be found in that classic.

School Administration.

By Charles B. Gilbert, New York.

The Development of the Teacher.

IT seems necessary to recapitulate briefly my doctrine as to the Freedom of the Teacher, as a misunderstanding has arisen in some quarters, and portions have been quoted out of their relations in such a way as to make it appear that I advocated a destructive radicalism subversive of order and proper administration.

First: True freedom has its seat within the individual and consists in a proper adjustment of personal tastes, abilities, and aspirations to conditions and obligations, and particularly to social conditions. No one is truly free who is wholly selfish; who is ignorant; who is prejudiced; who is self-sufficient or inconsiderate of the views, the needs, the knowledge of others.

Anarchy is not a phase of freedom; it is its antipode. In many respects submission to absolute authority is nearer freedom than complete isolation or anarchy. Life in society necessitates the consideration of all for each and each for all. The general good becomes paramount and must be so recognized. Indeed each individual only attains his freedom when he thus recognizes the superior claim of the social whole.

The difference between a benevolent tyranny and freedom is not in the end, which in both cases is the common good, but in the fact that in the one case submission to the general weal is forced upon the individual; in the other it is voluntarily and with purpose yielded. Now [illegible] to make the devotion of each individual to the [illegible]ood effective, there must be co-ordination, cen-[illegible] of authority, and organization. Without these [illegible]ormous waste. The individuals, however well [illegible]t in one another's way; some needs are over-

supplied; others are neglected, so that in an ideal social state—granted even individual perfection—government, central power, recognized by all the individuals and controlling to a degree their conduct, is necessary; how much more in a very imperfect social state with individuals of all shades and degrees of fitness for society.

The secret and the value of democracy is found, not in the absence of law or government, but rather in the utilization for common ends of all the powers of the different individuals freely contributed, which results in the education, that is, in the growth of the individuals.

Benevolent autocracy with even an absolutely perfect ruler would fail to develop the highest character in the subjects because it would fail to share responsibility.

The evolution of society is the result of individual efforts, under stress of circumstances, to ameliorate conditions. The chief value of such efforts is the growth in power and freedom of those who make them; that is, advancement in civilization is largely due to the development of those who assume responsibility for the general good, often with little and sometimes with no visible, present effect. Not immediate external result, but education, is the product of moral and social struggle, and this education is the one sufficient reward for such struggle.

Apply all this to the school. It is certainly necessary to have school officers with power and with responsibilities consistent with such power. A school superintendent must have authority, and must have responsibility for the work done under him. The same is true of the school principal, but it is also true of the teacher. Unquestionably unsatisfactory results would be produced if in a city school system there were no central power, and every individual were free to carry out his own law or his own whim. The result of such a condition would be somewhat akin to anarchy. At least there would be

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supplied; others are neglected, so that in an ideal social state—granted even individual perfection—government, central power, recognized by all the individuals and controlling to a degree their conduct, is necessary; how much more in a very imperfect social state with individuals of all shades and degrees of fitness for society.

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enormous waste, and countless children would suffer from crude and ill-digested experimentation.

I am an advocate of bestowing much power upon the school superintendent and making his subordinate officers, such as supervisors and principals, largely responsible for results, and there can be no responsibility without authority. It would be a mistake to organize school systems in such a way as to lessen the power of the superintendent and of the other officials. My plea is not for an overturning of government, but for the proper exercise of authority by those possessing it. The superintendent without authority would be weak indeed. The superintendent who thinks that knowledge will die with him, or who is afraid that his authority will be lessened if some one else shares responsibility with him is a foolish superintendent.

The fundamental principle of democracy, that of education thru responsibility, is essential for successful administration in schools.

The sum of all the knowledge and all the power of all the teaching force is certainly greater than that of the largest-headed superintendent, and the wise superintendent will so organize his forces as to utilize this power and this combined wisdom. He will endeavor to stimulate in his teachers that true freedom which is within, and he will bestow the other freedom which is also necessary, freedom for each teacher to do his best. There will, of course, be negation. Some things will necessarily be forbidden, but as in dealing with children there will be only so much negation as is necessary for success, and there will be every encouragement to free activity. Teachers will be stimulated to study, to visit, to see new things, to devise new things, and to put them into execution; first, for the sake of testing them, and afterwards if they are proven worthy, as permanent features of their work. Teachers will be held responsible for results more than for methods, tho methods that have been already demonstrated as vicious or dangerous will, of course, be forbidden. The teachers of to-day who should advocate the method of Dr. Rainsford's teacher in Ireland fifty years ago, namely, kicking the pupil in the shins for every mistake, would certainly need some negation, as abundant experience has proven such a method not desirable, and when teachers persistently refuse to follow the dictates of sound judgment, are recalcitrant to authority or inefficient, of course they should cease to be teachers. Any system of administration which makes it impossible or especially difficult to remove poor teachers, which destroys or lessens that power which all society finds necessary for its perpetuity and well-being, is dangerous, and if carried to extremes, would be absolutely subversive of good schools.

I have spoken thus at length in order to make clear my position and avoid doing any mischief. I trust that now it will be taken for granted that I am not an advocate of anarchy or of foolish license, but I am merely a rational believer in the positive method of administration as opposed to the negative; that I believe in that sort of democracy that develops the individual thru responsibility; that I look upon it as the first business of the superintendent to develop his teachers, and with them to develop his system and method, rather than to devise it all himself and force it down their throats.

Now then, in what ways may the school authorities develop teachers? I have spoken in previous articles quite at length of one; namely, by personal contact, critical, stimulating, suggestive, always kindly.

Perhaps the most definite means of helping teachers and of developing their freedom is the course of study. In a system of schools a course of study is necessary. No one surely will deny this. To allow each teacher to teach what he pleases to the children would quickly produce fatal disorganization. A course of study of th right kind brings unity and co-ordination into the syste and is indeed the chief unifying force. Of necessity, i prescribes that certain subjects shall be taught thruou the system, and that certain phases of these subject shall be taught in each grade corresponding to the development of the children. Now a course of study may be not a means to the freedom of the teacher, but ma represent tyranny of thought and method, tho the bes courses do not. One kind of bad course of study is th minutely mandatory. It not only prescribes in a genera way what is to be taught of different subjects in the different grades, but it prescribes in detail what is to b taught each week and each month and day, and impose a uniform method for teaching each subject. It leave the teacher nothing to do but obey orders.

Such courses are not uncommon, unfortunately Where they exist the most serious effect is seen in th teachers; they soon cease to try to exercise any judgment; they become inert and helpless. I am told tha the squirrels in Central Park have become so accustome to being fed that they have entirely given up the fruga habits of their wood life, and no longer lay up stores o nuts for the winter; hence if the winter is hard and th supply from visitors insufficient, the park authorities ar compelled to feed the lazy little animals. I have mor than once seen teachers in school systems as helpless intellectually as these squirrels are physically. Their wor has been prescribed to such a degree that they hav ceased to have judgment. When given general instructions as to the accomplishment of certain results, bu without detail of method, they have been hopelessly an pitifully at sea. I have also seen these same teacher after a course of freedom in which they have bee allowed to exercise their best abilities for definit rational ends grow greatly in strength and effectiveness throw off the inertia and helplessness of machine work, and become truly individual serviceable teachers.

A course of study should then be broad in its outlines, suggestive rather than mandatory as to details and methods. It should require results, but these results should be stated in large rather than in small terms. They should be results of growth manifested in power to do new things, rather than ability to answer a few stereotyped questions.

The great fault of the system of examinations conducted in this state under that really fine board of regents of the university is that the work required is so small and petty and minute that it belittles the teachers. Teachers become accustomed to drilling for the few and pitifully small points made in the examinations till they actually lose the power to think for themselves and to consider the needs of children. The last thing that is present in their minds when planning their work is the development of the pupils. The imminent need is to qualify their pupils to answer a few specific questions and get their cards.

Further, a course of study should stimulate teachers to self-improvement. One of the claims made against teachers as a body, especially in discussions of that utterly futile question, "Is teaching a profession?" is that they are not scholarly. After much observation I am convinced that the defect, in so far as it exists, is due chiefly to the lack of impulse towards self-improvement in most of our formal school systems. A teacher who has gone over the work of a grade a few times has acquired mastery of the few insignificant facts that must be imparted to the children and is able each year to do the required work with less effort. Very few of us keep up a high degree of intellectual activity without some stimulus outside of ourselves, so these teachers, finding t possible *to do their* work, keep a respectable position

thusiastic testimonials received. This is vastly more than a
"question-book." It will spur the teacher to advance in his profe
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Geography, 3d and 2d grades
U. S. History, 3d and 2d grades
Grammar, 3d, 2d, and 1st grades
Orthography and [illegible], 3d grade
Theory and Practice of Teaching, 3d, 2d, and 1st grades
[illegible] Composition, 3d grade
Physiology, 3d and 2d grades
Bookkeeping, 1st and 2d grades
[illegible] History, 1st and 2d grades
Physical Geography, 1st grade
Astronomy, professional grade
Botany, professional grade
Physics, " "
Chemistry, " "
Zoology, " "
Answers and [illegible] in the [illegible] back
Drawing
English Literature, 1st grade
Natural Philosophy
Algebra, professional grade
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3. In the Department of Educational Classics, extracts from the books most influential in stimulating teachers to an appreciation of [illegible] and cultivation of the [illegible]
4. In the Department of Art History, [illegible] side of the course, [illegible] and yet kept a separate whole, [illegible] the entire year to Greek and Roman art. [illegible] EDUCATIONAL FOUNDATIONS will be highly valued.

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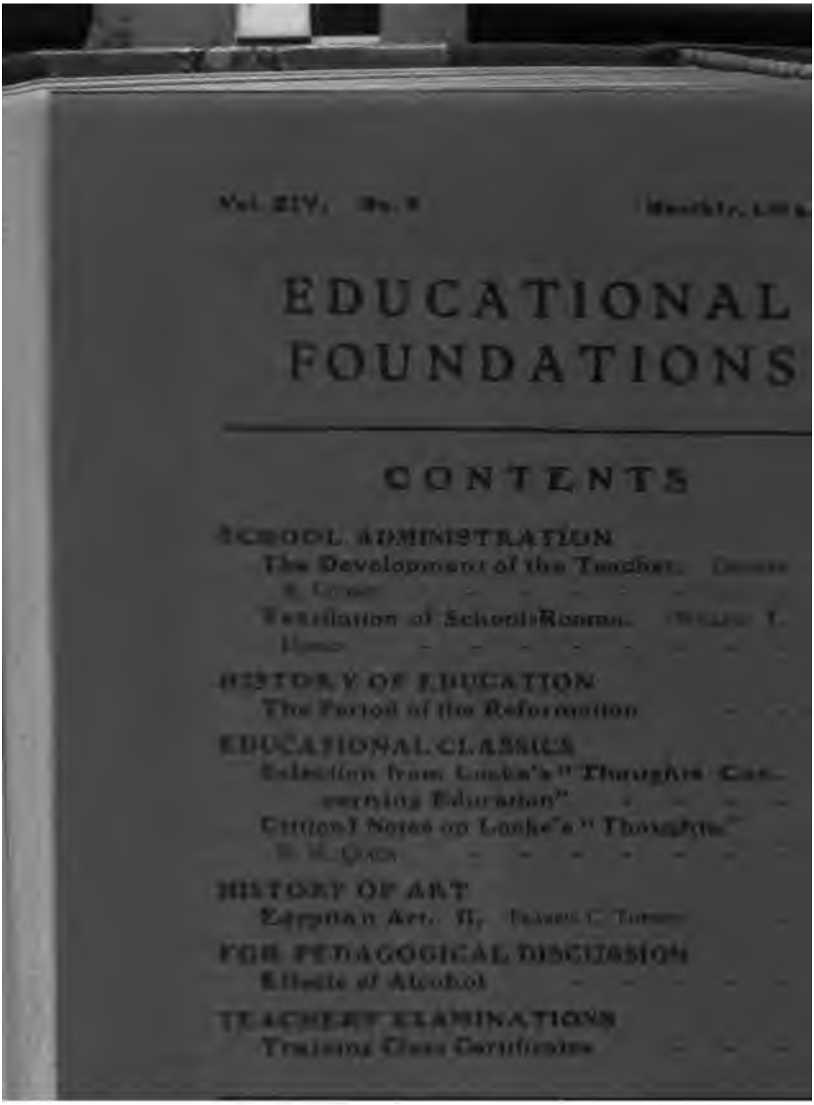

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Educational Foundations

Ossian H. Lang, Editor.

Vol. XIV. MAY, 1903. No. 9

There are two opposing extremes of attitude with reference to the freedom of teachers. One would sacrifice everybody and everything to "uniformity;" the other would permit full swing to the idiosyncrasies of the individual teachers. Both are, of course, in the wrong. Yet it is hard to draw the line of reason between the two. Teachers vary so much in professional fitness and experience that consciousness of conditions in localities of one's acquaintance cannot but prejudice the mind in one or the other direction. If there were to be assumed at least a certain minimum of professional equipment so that the question might turn wholly about the exercise of personality, the question would be less difficult of solution. However, let matters stand as they will; it is well to make a careful study of the propositions laid down by so vigorous and broad-minded a thinker as Mr. Gilbert, whose extensive experience in dealing with large problems of school administration entitle him to a respectful hearing. The subject is of vital interest. The foundation principles of school organization and administration are involved in it.

John Locke's influence upon educational and philosophic thought has been wonderfully constructive. Educators are beginning to recognize that the great school reform, with which the names of Basedow and Rousseau were most prominently identified, had its source in him. All this in spite of the fact that the logic of his own views concerning education aimed at an education preparing a gentleman by private tutoring to a comfortable participation in society with never a revolutionary thought anywhere. Locke's "Thoughts Concerning Education" are of surpassing importance to students of education. The selections made for the present number represent the best and most significant ideas to be found in that classic.

School Administration.

By Charles B. Gilbert, New York.

The Development of the Teacher.

IT seems necessary to recapitulate briefly my doctrine as to the Freedom of the Teacher, as a misunderstanding has arisen in some quarters, and portions have been quoted out of their relations in such a way as to make it appear that I advocated a destructive radicalism subversive of order and proper administration.

First: True freedom has its seat within the individual and consists in a proper adjustment of personal tastes, abilities, and aspirations to conditions and obligations, and particularly to social conditions. No one is truly free who is wholly selfish; who is ignorant; who is prejudiced; who is self-sufficient or inconsiderate of the views, the needs, the knowledge of others.

Anarchy is not a phase of freedom; it is its antipode. In many respects submission to absolute authority is nearer freedom than complete isolation or anarchy. Life in society necessitates the consideration of all for each and each for all. The general good becomes paramount and must be so recognized. Indeed each individual only attains his freedom when he thus recognizes the superior claim of the social whole.

The difference between a benevolent tyranny and freedom is not in the end, which in both cases is the common good, but in the fact that in the one case submission to the general weal is forced upon the individual; in the other it is voluntarily and with purpose yielded. Now in order to make the devotion of each individual to the general good effective, there must be co-ordination, centralization of authority, and organization. Without these there is enormous waste. The individuals, however well meaning, get in one another's way; some needs are over-

supplied; others are neglected, so that in an ideal social state—granted even individual perfection—government, central power, recognized by all the individuals and controlling to a degree their conduct, is necessary; how much more in a very imperfect social state with individuals of all shades and degrees of fitness for society.

The secret and the value of democracy is found, not in the absence of law or government, but rather in the utilization for common ends of all the powers of the different individuals freely contributed, which results in the education, that is, in the growth of the individuals.

Benevolent autocracy with even an absolutely perfect ruler would fail to develop the highest character in the subjects because it would fail to share responsibility.

The evolution of society is the result of individual efforts, under stress of circumstances, to ameliorate conditions. The chief value of such efforts is the growth in power and freedom of those who make them; that is, advancement in civilization is largely due to the development of those who assume responsibility for the general good, often with little and sometimes with no visible, present effect. Not immediate external result, but education, is the product of moral and social struggle, and this education is the one sufficient reward for such struggle.

Apply all this to the school. It is certainly necessary to have school officers with power and with responsibilities consistent with such power. A school superintendent must have authority, and must have responsibility for the work done under him. The same is true of the school principal, but it is also true of the teacher. Unquestionably unsatisfactory results would be produced if in a city school system there were no central power, and every individual were free to carry out his own law or his own whim. The result of such a condition would be somewhat akin to anarchy. At least there would be

enormous waste, and countless children would suffer from crude and ill-digested experimentation.

I am an advocate of bestowing much power upon the school superintendent and making his subordinate officers, such as supervisors and principals, largely responsible for results, and there can be no responsibility without authority. It would be a mistake to organize school systems in such a way as to lessen the power of the superintendent and of the other officials. My plea is not for an overturning of government, but for the proper exercise of authority by those possessing it. The superintendent without authority would be weak indeed. The superintendent who thinks that knowledge will die with him, or who is afraid that his authority will be lessened if some one else shares responsibility with him is a foolish superintendent.

The fundamental principle of democracy, that of education thru responsibility, is essential for successful administration in schools.

The sum of all the knowledge and all the power of all the teaching force is certainly greater than that of the largest-headed superintendent, and the wise superintendent will so organize his forces as to utilize this power and this combined wisdom. He will endeavor to stimulate in his teachers that true freedom which is within, and he will bestow the other freedom which is also necessary, freedom for each teacher to do his best. There will, of course, be negation. Some things will necessarily be forbidden, but as in dealing with children there will be only so much negation as is necessary for success, and there will be every encouragement to free activity. Teachers will be stimulated to study, to visit, to see new things, to devise new things, and to put them into execution; first, for the sake of testing them, and afterwards if they are proven worthy, as permanent features of their work. Teachers will be held responsible for results more than for methods, tho methods that have been already demonstrated as vicious or dangerous will, of course, be forbidden. The teachers of to-day who should advocate the method of Dr. Rainsford's teacher in Ireland fifty years ago, namely, kicking the pupil in the shins for every mistake, would certainly need some negation, as abundant experience has proven such a method not desirable, and when teachers persistently refuse to follow the dictates of sound judgment, are recalcitrant to authority or inefficient, of course they should cease to be teachers. Any system of administration which makes it impossible or especially difficult to remove poor teachers, which destroys or lessens that power which all society finds necessary for its perpetuity and well-being, is dangerous, and if carried to extremes, would be absolutely subversive of good schools.

I have spoken thus at length in order to make clear my position and avoid doing any mischief. I trust that now it will be taken for granted that I am not an advocate of anarchy or of foolish license, but I am merely a rational believer in the positive method of administration as opposed to the negative; that I believe in that sort of democracy that develops the individual thru responsibility; that I look upon it as the first business of the superintendent to develop his teachers, and with them to develop his system and method, rather than to devise it all himself and force it down their throats.

Now then, in what ways may the school authorities develop teachers? I have spoken in previous articles quite at length of one; namely, by personal contact, critical, stimulating, suggestive, always kindly.

Perhaps the most definite means of helping teachers and of developing their freedom is the course of study. In a system of schools a course of study is necessary. No one surely will deny this. To allow each teacher to teach what he pleases to the children would quickly produce fatal disorganization. A course of study of the right kind brings unity and co-ordination into the system and is indeed the chief unifying force. Of necessity, it prescribes that certain subjects shall be taught thruout the system, and that certain phases of these subjects shall be taught in each grade corresponding to the development of the children. Now a course of study may be, not a means to the freedom of the teacher, but may represent tyranny of thought and method, tho the best courses do not. One kind of bad course of study is the minutely mandatory. It not only prescribes in a general way what is to be taught of different subjects in the different grades, but it prescribes in detail what is to be taught each week and each month and day, and imposes a uniform method for teaching each subject. It leaves the teacher nothing to do but obey orders.

Such courses are not uncommon, unfortunately. Where they exist the most serious effect is seen in the teachers; they soon cease to try to exercise any judgment; they become inert and helpless. I am told that the squirrels in Central Park have become so accustomed to being fed that they have entirely given up the frugal habits of their wood life, and no longer lay up stores of nuts for the winter; hence if the winter is hard and the supply from visitors insufficient, the park authorities are compelled to feed the lazy little animals. I have more than once seen teachers in school systems as helpless intellectually as these squirrels are physically. Their work has been prescribed to such a degree that they have ceased to have judgment. When given general instructions as to the accomplishment of certain results, but without detail of method, they have been hopelessly and pitifully at sea. I have also seen these same teachers after a course of freedom in which they have been allowed to exercise their best abilities for definite rational ends grow greatly in strength and effectiveness, throw off the inertia and helplessness of machine work, and become truly individual serviceable teachers.

A course of study should then be broad in its outlines, suggestive rather than mandatory as to details and methods. It should require results, but these results should be stated in large rather than in small terms. They should be results of growth manifested in power to do new things, rather than ability to answer a few stereotyped questions.

The great fault of the system of examinations conducted in this state under that really fine board of regents of the university is that the work required is so small and petty and minute that it belittles the teachers. Teachers become accustomed to drilling for the few and pitifully small points made in the examinations till they actually lose the power to think for themselves and to consider the needs of children. The last thing that is present in their minds when planning their work is the development of the pupils. The imminent need is to qualify their pupils to answer a few specific questions and get their cards.

Further, a course of study should stimulate teachers to self-improvement. One of the claims made against teachers as a body, especially in discussions of that utterly futile question, "Is teaching a profession?" is that they are not scholarly. After much observation I am convinced that the defect, in so far as it exists, is due chiefly to the lack of impulse towards self-improvement in most of our formal school systems. A teacher who has gone over the work of a grade a few times has acquired mastery of the few insignificant facts that must be imparted to the children and is able each year to do the required work with less effort. Very few of us keep up a high degree of intellectual activity without some stimulus outside of ourselves, so these teachers, finding t possible to do their work, keep a respectable position among their associates, hold their places, and draw their pay, often settle into a condition of intellectual coma, and dry up intellectually and sentimentally as well. It is always to me most offensive and saddening to hear flippant talk about old school teachers, especially women; but it must be admitted that there are enough of the narrow, unscholarly, and unstudious among them to give some excuse for raillery, and these are the teachers, almost without exception, found in mechanical systems, whose work is exactly laid out for them, who receive from their superiors no stimulus to the exercise of originality, and none to broad, thoro investigation. The work in the school-room does not require study, except of a very meager sort; the administration does not welcome ideas, and the teacher naturally follows the line of least resistance. Hence, a course of study should necessitate much and continuous application on the part of the teacher; it should not be too definite; it should allow room for the exercise of imagination and of originality; it should make necessary two definite kinds of study—one technically educational or paideutic; the other cultural. That this may be the effect, a course of study must be based upon educational principles. Too many of those found in schools are the mere haphazard putting together of detailed instruction regarding the conventional subjects of school curricula. Those who made the courses have put no philosophy in it, and often have had none to put in.

A course should not be so superficial that it can be understood without study. It is good to make it necessary for teachers to study the curriculum and then to study educational principles in order to understand it. This is in itself broadening and strengthening and opens up to the teachers, especially the more thoughtful ones and the brighter ones, wide fields of inquiry and fine opportunities for growth.

The second line of study which curricula should make necessary for the teachers is cultural. We all know that other things being equal the best teacher is the one who knows the most, and we also know that teachers knowing very little can get along fairly well teaching children what is required by a very common kind of course of study; so much so that I have heard school authorities insist that knowledge was quite unimportant for teachers of little children; that ignorant teachers could do about as well as more scholarly ones in the lower grades. Of course, this is arrant nonsense, but some people hold it.

A course of study should require of all teachers considerable knowledge. It should stimulate them to the acquisition of such knowledge in many lines. One of the arguments sometimes advanced against the introduction of nature study and other new branches into the grammar school course is that teachers do not know enough to teach them. One of the chief advantages of the introduction of such studies, or of the enriching of the curriculum, as President Eliot calls it, is that it makes students of the teachers. They try to qualify themselves to teach these subjects, and I am satisfied from observation that usually, when required to teach new subjects, they do qualify themselves to teach them well; but perhaps the greatest effect is not in the fact that they have more specific knowledge upon some subject to be taught, but that the windows of their minds are open to a larger world. They begin to get the scholarly taste; to love study. I have seen many young teachers possessed of little professional ambition and little scholarship grow into fine teachers of considerable scholarship and even culture, thru the stimulating power of a broad and rich course of study.

To recapitulate, including some points in previous articles, freedom is primarily a mental quality. It is secured thru struggle and cannot be bestowed from without. Its acquisition, however, can be facilitated or hindered by the right or wrong environment. Freedom is the opposite of anarchy; it is the friend of law. The highest freedom is secured in institutions in which the individuals voluntarily co-operate for common ends. In schools freedom does not imply either lack of organization or weakness of administrative force; it implies the opposite, but for its full fruition it requires that the powers in authority allow and encourage the exercise of individual force.

First, supervising officers can help teachers in the development of freedom and of power by personal contact, sympathetic, kindly, stimulating, both in the class-room and in private conferences.

Second, school authorities can stimulate freedom and power in teachers by furnishing them a good course of study mandatory only as to broad requirements, suggestive, stimulating, and requiring both professional and cultural improvement on the part of the teachers.

In the next article I will speak of the kind of help which may be furnished in various meetings of teachers.

QUESTIONS.

1. Why may anarchy be called the antipode of freedom? Apply the thought to " freedom of the teacher."
2. What fundamental considerations should govern the distribution of authority in a large school system? Give reasons and illustrate.
3. What is meant by development of individuality thru responsibility? Apply (a) to school system, (b) to educational methods.
4. How may the course of study become a means of enslaving teachers and rendering them professionally helpless? Illustrate.
5. What are the most effective means for stimulating teachers to self-improvement and the exercise of originality? Give reasons.
6. How can supervisors best help the teachers? Explain.
7. How much freedom would you like to have in the conduct of your school work? Give reasons.

Locke's "Thoughts Concerning Education."

Critical Notes by the REV. R. H. QUICK.

WE cannot but regret that from ignorance of Ascham, Mulcaster, Brinsly, and Hoole among English writers, and among the continental writers of Comenius, who in those days was the great authority with educational reformers, many notions of things escaped Locke which his reason would doubtless have made use of had they come into his mind. But tho he seems to have read little or nothing on education except what Montaigne says in his essays, this reading of Montaigne brought him into the succession of thinkers who have handed on a torch of truth with a flame of increasing brightness.*

The great intellectual revolution which we call the Renascence was a revival of a taste for literary beauty as displayed in the classics of Greece and Rome. The result of this revival was that all the active minds of Europe devoted themselves to the study of the ancient writers, whom they valued more for their literary skill than for their knowledge or thought. Rabelais was a

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*Dr. Arnstaedt shows the following points of agreement in Rabelais, Montaigne, Locke, and Rousseau. 1. Care for a single child only, and by consequence neglect of the education of the people. 2. The degrading of learning from the first place and placing the main stress on virtue and the formation of character. 3. Importance of physical education. 4. The condemnation of the harshness commonly shown to the young, and the demand that they should be made happy even in work. 5. Condemnation of large schools. 6. The employment of a governor who is to be wise rather than learned. 7. Condemnation of instruction which inculcates not how to think but what to think, or simply what to remember. 8. Teaching at first hand, *i. e.*, by the senses or by direct experience. 9. Travel as a part of education. To these might probably be added several more points of agreement, *e. g.*, the employment of games for educational purposes, and the training in some handicraft.

child of the Renascence in his thirst for learning, but he valued knowledge rather than literary beauty, and the instruction he sketched out gave the knowledge of things, both thru books, that is, verbal realism as the Germans call it, and thru direct contact with the things themselves, that is, realism proper. And he was not only the father of realism; he was the first to denounce the absurdities of the school-room, and, besides this, he made education extend far beyond instruction.

Montaigne had not the Renascence thirst for learning. He by no means bowed down before a learned man or coveted the distinction of a learned man for himself. His social rank was high, and this distinction was in his eyes, as in the eyes of most people, far preferable. And thus it happened that this fine writer, with his clearness of thought and expression and his unbounded wealth of apt illustrations, set himself against bookishness, and so became the great spokesman of those who were dissatisfied with the school system of the Renascence.

In the time of the Renascence the admiration for learning made men strive for distinction by their knowledge of the classics, and caused them to pride themselves on second-hand knowledge and to make a display with it. This led to Montaigne's vigorous onslaught on second-hand knowledge. But besides this there is another count in his indictment against the educational system of the Renascence, and this second count we must carefully distinguish from the first. He maintains against the schoolmasters that knowledge, whether second-hand or first, should not be made the main object in education, but that the educator should rather endeavor to train the young up to wisdom and virtue. He begins with a quotation from Rabelais: "The greatest clerks are not the wisest men." In expanding this thought he brings out that those who have read most and remember most are not on that account those who know most, and further that those who know most are not on that account the wisest and best men.

Locke's study of Montaigne came late. He went to Holland when he was fifty-two years old; and during his stay there we find the following entry in his journal: "February 14 (Lord King seems to think the year of no consequence). Montaigne by a gentle kind of negligence clothed in a peculiar sort of good language, persuades without reason: his essays are a texture of strong sayings, sentences, and ends of verses, which he so puts together that they have an extraordinary force upon men's minds. He reasons not, but diverts himself and pleases others; full of pride and vanity" (Lord King's *Locke*, First Edition, p. 160). Here we find Locke depreciating Montaigne ("he reasons not" was in Locke's mouth the strongest condemnation) and struggling against his influence, tho half conscious that he was struggling in vain. It was not, we may be sure, to this study of Montaigne that Locke owed his favorite thoughts on education, for as he had been engaged in educating for many years, his views must have been pretty well settled, and he no doubt brought to the reading of the essay on education much that he also found there. Still, the chief importance of the thoughts is due to the prominence given by Locke to truths which had already been set forth by Montaigne.

Montaigne, as we saw, was much influenced by his social position. Locke also wrote "as a gentleman for gentlemen." "That most to be taken care of," he writes, "is the gentleman's calling; for if those of that rank are by their education once set right, they will quickly bring all the rest into order." That a human being could need education as a human being, might be thought a conception beyond the minds of Locke and his contemporaries, and yet Comenius had already said: "I aim at securing for all human beings a training in all that is proper to their common humanity." This is a much higher ideal than Locke's. He saw indeed that "children should not be suffered to lose the considering of human nature in the shufflings of outward conditions," but he seems, to me at least, not to have thought enough of our common human nature in considering education. Everything must be settled with an eye to class distinctions, "the several degrees of men," as he says; and we want "the easiest, shortest, and likeliest way to produce virtuous, useful, and able men in their distinct callings." He himself thought only of the gentleman's calling; and his reflexions were limited if not distorted by this exclusiveness.

Some have maintained that the chief merit of the thoughts lay in the prominence given to physical education, which is the first point treated of: indeed a recent selection of important passages from the great writers on education (E. Sperber's Gütersloh) gives Locke's advice about physical education only. His own sufferings from ill-health, no doubt, made our author so urgent on this point. He tells us almost pathetically that if in pursuit of knowledge we are negligent of health we are likely to "rob God of so much service and our neighbor of all that help, which in a state of health, with moderate knowledge, we might have been able to perform. He that sinks his vessel by overloading it, tho it be with gold and silver and precious stones, will give his owner but an ill account of his voyage." (Of study.) Locke has no doubt done good service in drawing attention to the importance of physical education and by his advice about it; but Rabelais and Montaigne had made as much account of the training of the body, and so had some English writers, Sir Thomas Elyot in his "Governor," and, still more remarkably, Richard Mulcaster in his "Positions."

The bodily health being cared for, we come to the gentleman's essential requirements in mind and manners, and Locke gives them in the following order as the order of their importance: 1, Virtue; 2, Wisdom; 3, Breeding; 4, Learning. His object in writing is to show how these may be secured.

There are two truths about education which Locke applies to everything with an almost tiresome iteration:

1. The secret of instruction in all arts, and indeed in conduct too, is to get what we would teach settled in the pupil by practice till it becomes a habit. The child's actions and the child's learning are to be thought of as tending to habits. "That which I cannot too often inculcate is that whatever the matter be about which it is conversant whether great or small, the main (I had almost said only) thing to be considered in every action of a child is what influence it will have upon his mind, what habit it tends to and is likely to settle in him, how it will become him when he is bigger, and if it be encouraged, whither it will lead him when he is grown up."

2. The grand influence of all is the influence of companions. "Having named company I am almost ready to throw away my pen, and trouble you no further on this subject; for since that does more than all precepts, rules, and instructions, methinks 'tis almost wholly in vain to make a long discourse of other things and to talk of that almost to no purpose."

1. The immense effect of practice both in moral and intellectual education has been dwelt upon by the greatest writers on education in our own century. We have some touching instances of the way in which Pestalozzi taught even poor children to practice self-denial to relieve the distress of others.

2. Locke seems in constant difficulties about company. The young gentleman may not be sent to school because his bringing up requires a much more complete superin-

tendence than a schoolmaster can give, and also because he must not be exposed to the "prevailing infection" of schoolfellows. But Locke sees clearly that children brought up at home must be left a good deal in the charge of servants, and of servants he has no higher opinion than of schoolboys. Again and again he refers to this difficulty and shows an uncomfortable consciousness that here is a rock on which the good ship will probably go to pieces.

Learning, which schoolmasters are apt to make the chief thing in education or even to take for education itself, Locke considers as the least important of his requisites; and we have seen that in this lies the main excellence of his book. When we come to his suggestions about learning we find them in one respect very disappointing. About other matters he lays down the rule that in every action of the child we are to consider mainly, if not exclusively, what influence the action will have on the child's mind and what habit it will strengthen. But when he comes to learning, Locke, in spite of his own rule, discusses not the effect of this or that study on the mind, but whether or not the knowledge or skill will be "useful" to a gentleman.

When Locke says that what the youth is to receive from education is "habits woven into the very principles of his nature" he must be understood to include intellectual habits as well as moral. And so far as I can form a notion of Locke's tone from a careful study of the whole book I must decide that I know no writer on education less open to the charge of indifference to the cultivation of the mind.

Those who wish thoroly to understand Locke's "Thoughts Concerning Education" should study not only the book so called, but also the more carefully written "Essay on the Conduct of the Human Understanding."

Ventilation of School-Rooms.*

By William T. Harris, U. S. Commissioner of Education.

UNDOUBTEDLY, the ideal plan for warming and ventilating houses includes a fresh-air shaft, bringing down the air from the top of the building, heating the same, and forcing it into the school-room by a fan moved by steam or other power. The feet should be kept warmer than the head, consequently the foul-air flues should be placed near the floor. This plan is generally considered too expensive for use in most places. But twenty years ago many of the buildings in Chicago were heated and ventilated on this plan. By simply turning a register the inflow of hot water could be stopped at once, and the inflow of fresh, cool air substituted. The steam engine which furnished the hot air was placed in a small building just outside of the school-house. I have never inspected schools elsewhere that were heated and ventilated in so satisfactory a manner.

The great majority of school-houses in this country depend on windows and doors and chimney flues for their ventilation, and for heating depend upon stoves or hot-air furnaces, or steam coils. The universal tendency when the air of the school-room becomes too hot is to raise a window and let in the cold air from the bottom. The consequence of this is a direct draft upon the backs or shoulders of pupils sitting near the window. Pupils at a distance from the window get some of the fresh air without danger from the current of air caused. It seems to me that very many cases of ill-health in later life can be traced back to carelessness in this matter of direct ventilation from the window upon the pupil. The seeds of future rheumatism were then planted. Rheumatism, it is well known, leads to heart disease. In case the lungs are the weakest point, consumption may set in first, especially where the effect of sitting in a draft of air produces a bad cold instead of rheumatism.

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*This "Method of Ventilating School-Rooms by Windows and Fireplaces" was published in Dr. Harris's Education Report and is here reprinted with slight changes.

Inasmuch as the cold stream of air falls to the floor on entering the room and diffuses itself around the floor, it tends to produce cold feet. Hence the ventilation of the room from the bottom of the window is sure to be inimical to the health of the pupil.

The child must have fresh air, but the fresh air must be introduced thru the top of the window, and not thru the bottom. This is the point I wish to emphasize. If the window is not constructed so as to be lowered from the top, it can easily be changed. A portion of the supports of the window can be cut out with a chisel, so as to allow the upper sash to be lowered to the distance of one foot or more. Then two buttons may be fixed, one of which supports the window within one inch of the top and another that supports it when lowered a foot or more. This change should be made in all the windows and not merely in a few of them. Every school-room should have at least four windows. Each of these four windows should be so constructed that the upper sash may be lowered.

In cold, sharp weather, or very windy weather, when the air is mild, the upper sash of each of the four or more windows of the school-room should be lowered one inch from the top. The cold air from without enters the space above the window and meets the hottest air in the room. It is heavier and descends toward the floor, creeping down the side of the window and the wall of the room and becoming heated in its passage. During its descent it also diffuses itself more or less, and in no case does it strike the backs or shoulders of the pupils, provided that there is an aisle, as there ought to be, between the pupils' desks and the wall of the room. Moreover, when it reaches the floor it has become so much modified and warmed it does not cause a cold chill to the feet of the children.

If the weather is warm or mild, and there is little breeze stirring, the windows should all be lowered from six inches to a foot. This will introduce a much larger inflow of fresh air, but it will hold its course to the floor near the wall or down the window without striking the shoulders of the pupils. In case, however, of cold weather, or of windy, mild weather, the volume of air pouring thru an aperture a foot wide would be projected forward into the room like a cataract, and would reach the pupils and do them harm. Every one knows that the hot air rises toward the top of the room and remains as a sort of reservoir of air above the point at which fresh air is introduced. When the window is raised from the bottom and not lowered from the top, the persons seated on the other side of the room not affected by the inflow of air feel the oppressing effect on the body of stagnant air in the top of the room. This is instantly removed upon opening the ducts at the top of the room, because all of the air in the top of the room is set in motion by the process.

I have said that all of the windows, and not some of them, should be lowered from the top. It will not do to fix one window alone and suppose that is sufficient for the purpose of ventilating a whole school-room. It will do something, but what it does will not be well done. For, in order to affect the air of the whole room, it will be necessary to lower the window too much, and the consequence will be the creation of a too brisk current, the formation of a cataract of air, as it were, which will flow outward from the wall into the school-room so far as to strike the pupils sitting nearest that window. All of the windows should be lowered, and no more than is necessary to produce the change of air in the whole room by the descent of a thin sheet of cold air down the windows and the wall to the floor.

This method of ventilating the rooms has been tested by me during many years' practice. Any school-room that has four windows to it may be ventilated by this process in a fairly serviceable way. But it is quite important that there should be ventilating flues at the bottom of the room opening into a large ventilating flue surrounding the smokestacks which carry off the heat of the furnace. There is a sort of sour school-room air which the school visitor remembers vividly. This school-room smell can not be removed effectually except by ventilators at the bottom of the room.

Window Ventilation Insufficient.

The ventilation by means of the tops of the windows, tho giving a fair supply of fresh air to all in the room, is not quite adequate to remove this school-room smell here spoken of. The ventilating flue at the bottom of the room opening into the smokestack is supposed to draw the air out of the bottom of the room by the draft of the heated air ascending the smokestack. By the term "smokestack," I refer to the iron pipes within the chimney thru which the smoke and gases from the fuel escape up the chimney. A space left around this smokestack and open all the way to the top of the chimney furnishes the ventilating flue which is found to do the service in school-houses. When the building is not heated by furnace and the volume of air in the ventilating flues is not heated, there will not be a draft sufficient to suck out the sour and fetid air from the bottom of the school-room. An open fireplace in some part of the school-room will answer this purpose admirably if a small fire is kept in it constantly, even in summer. A kerosene lamp of small size will do wonders by causing an ascending current of air which draws out the bad air at the bottom of the room.

In case the room is heated by a stove, the stove should be a large one, so that the door may be left open after the coal is ignited. The draft which carries the steam and gases up the chimney also draws out the bad air from the lower part of the room. In case wood is used, and an open door occasions too rapid combustion of the fuel, some other plan must be adopted.

I should have said above that when the outdoor temperature is 80° F., or above, the windows may be raised from the bottom a foot or so, and lowered from the top as much as possible.

Oblique Boards.

There are devices of oblique boards placed at the bottom of the window, or at the top of it, which are intended to deflect the current of air upward, and thereby prevent its injurious effects on the shoulders of the pupils. These devices may be of some use, but the oblique board serves to prevent the inflow of air when there is no breeze stirring outside of the school-room. For air, when still, refuses to climb over the oblique board, just as water, or any other fluid, refuses to climb over its bank. The oblique arrangement will work only when the wind blows toward the school-room.

The Best Method.

Of all methods of heating the school-room by direct radiation, hot-water pipes extending around the room, connected with means of admitting fresh air under the pipes, is the best I have seen. The steam coil is apt to overheat and injure the quality of the air, altho this may be rendered unnecessary by a more liberal supply of coils. The stove and the fireplace heat the school-room unevenly, but they furnish a natural means of ventilation, while the steam coil or the hot-water pipes demand some auxiliary process for ventilation, a process which is sometimes neglected, however. If ventilation is not provided for, the steam or hot-water heating apparatus may prove quite injurious to the health of the pupils.

History of Education.

The Period of the Reformation.

[Adapted for EDUCATIONAL FOUNDATIONS from Weiner's "Geschichte der Paedagogik.]

THE progress made by the Humanists in the field of education was at first considerably checked by the Reformation. In the early part of this period most of the Humanists became followers of Luther, but a break soon became inevitable. The interest of the new movement centered so exclusively on theological, political, and social questions, that all other matters were neglected. Luther, himself, spoke of Aristotle as an "idle ass," a "cursed, supercilious, rascally heathen." His host of illiterate followers took up the cry, and those who felt themselves moved by the "Holy Spirit" were warned to give up "culture and learning." As a result, the universities and schools reared by the Humanists fell into decay. At least, Erasmus attributed it to the influence of Luther, whose aim, he said, was to put an end to all learning.

It was inevitable, however, that the two movements should eventually unite, for the reformers of the sixteenth century had, almost without exception, been educated in the schools of the Humanists.

Luther, himself, recognized the value of the Humanistic schools and expressed it as his conviction that they had been an important factor in enlightening the people, thus making possible his own efforts for the improvement of the church. He considered their courses of study and methods of instruction very superior to those in vogue in the cloistral schools, and, for this reason, wished to have them introduced into the schools which he was then striving to establish.

In 1524 he wrote his celebrated letter "to the aldermen of all the cities of Germany, asking them to establish and maintain Christian schools." It was in this letter that he first laid down the principle that the erection and maintenance of schools should be in the hands of the higher secular authorities. "The education and instruction of children cannot be left to parents," he said. "In the first place, many of them never received proper education; in the second place, their business duties and household cares take up all their time. Very few have the means to employ special instructors—hence, the government must assist them. It is to the interest of the state to advance' the education and culture of its subjects just as it is its duty to look after their external safety.

He then turned upon those who had asked, "Why should we learn Latin, Greek, Hebrew, or any of the liberal arts?" "All public servants—both those in the service of the church and those in the service of the state—have need of a thoro scientific training. A knowledge of the ancient languages is indispensable to both: to the clergy because it enables them to read the Gospel in the original text; to the servants of the state because it opens up to them manifold branches of useful information. To be sure," he continues, "only those pupils who evince special ability should be prepared to become priests, teachers, judges, or for other learned professions. For the rest—boys as well as girls—one or two hours of instruction daily will suffice."

Thus Luther demanded, not only that the schools should be governed by political authorities,—he wished, also, to secure schools for both sexes. In the Middle Ages schools were erected chiefly in the interests of the clergy. Luther introduced a new phase of education: side by side with theological studies he placed secular studies; in addition to the training of scholars, he wished *a system of popular* education.

In advocating these public schools he thought only of Latin schools; the indispensable foundation for the reforms he hoped to bring about in university education. In his "Sermon, asking that children be kept in school" (1530), Luther urged that the higher authorities be given power to enforce attendance at these Latin schools. "Those who are mentally capable should be compelled to attend schools just as those who are physically capable are compelled to bear arms." The effect of this "sermon" was significant; during the first thirty years of the sixteenth century many cities erected new schools, while others introduced Luther's principles into the schools already existing. A number of princes sought at once to establish public schools. Everywhere attempts were made to raise funds to assist gifted young men having no means, to prepare for public service in church and state.

Luther, however, did not penetrate so deeply into the practical life of the schools as did his friend and adviser, Philip Melanchthon (1493-1560): a Humanist, and at the same time, one of the foremost workers in the new movement for educational reform. In 1518, he was appointed professor of Greek at the University of Wittenberg; in his opening address, "De corrigendis adolescentiae litteris," he severely criticised the educational methods of the scholastic schools, earnestly recommending a careful study of Roman, and especially Greek classics. It was due to his influence, that the school regulations of the elector of Saxony were regarded as extremely significant even far beyond the boundaries of Saxony. These regulations which were contained in the rules for the "Instruction of Inspectors issued for Parsons in the Electorate of Saxony" (1528), were very similar to the Reformers' school requirements. These requirements of the elector may be regarded as the mimimum for a grammar-school in the Reformers' sense of the term. The elector's purpose in putting these requirements at a minimum was to demand the least possible expenditure on the part of the cities and thus prevent the city authorities from being frightened at once by the project. In this way he hóped to establish a number of Latin schools.

In these, all instruction was to be confined to the Latin language. Not only were the pupils to learn to read it, but also to speak it, and the instructors were expected to use only that language as a medium of conversation with their pupils. The course was to be divided into three periods, each succeeding period covering more years than the preceding. The lowest class was to learn to read and write from the Latin primer compiled by Melanchthon under the title "Enchiridion Elementorum puerilium." Grammar, including etymology, syntax, prosody and meter, was taken up in the second period. In the third period, dialectics and rhetoric were substituted for grammar. The students were expected to write a Latin composition,—which might take the form of a letter or a series of verses,—every week. Instruction in singing was to be given daily.

QUESTIONS.

1. What was the relation of Humanistic learning to the Reformation?
2. What were Luther's views concerning education and schools?
3. What school regulations were the result of Melanchthon's efforts?
4. What bearing had the study of the classics, as urged by the Humanists, upon present educational conditions?
5. In what important elements was the Humanistic learning lacking?
6. Which is preferable, training in the classics or scientific training? Give reasons for your opinion.

Educational Classics.

Selections from Locke's "Thoughts Concerning Education."

A "SOUND mind in a sound body" is a short but full description of a happy state in this world. He that has these two, has little more to wish for; and he that wants either of them, will be but little the better for anything else. I confess, there are some men's constitutions of body and mind so vigorous, and well-framed by nature, that they need not much assistance from others; but by the strength of their natural genius, they are from their cradles carried towards what is excellent; and by the privilege of their happy constitutions are able to do wonders. But examples of this kind are but few, and I think I may say, that of all the men we meet with, nine parts of ten are what they are, good or evil, useful or not, by their education. 'Tis that which makes the great difference in mankind. The little, or almost insensible impressions on our tender infancies have very important and lasting consequences.

Health.—I imagine the minds of children as easily turned this or that way, as water itself; and tho this be the principal part, and our main care should be about the inside, yet the clay cottage is not to be neglected. I shall therefore consider first the health of the body.

I say *he* when speaking of the child, because the principal aim of my discourse is how a young gentleman should be brought up from his infancy, which, in all things, will not so perfectly suit the education of daughters; tho where the difference of sex requires different treatment, it will be no hard matter to distinguish.

In alterations from our ordinary way of living, the *changes* must be made by gentle and insensible degrees, so we may bring our bodies to anything without pain and without danger.

As years increase, liberty must come with them, and in a great many things he must be trusted to his own conduct, since there cannot always be a guard upon him, except what you have put into his own mind by good principles and established habits, which is the best and surest, and therefore most to be taken care of; for, from repeated cautions and rules, ever so often inculcated, you are not to expect anything either in this or any other case, farther than practice has established them into habits.

Let nature have scope to fashion the body as she thinks best. She works of herself a great deal better and exacter than we can direct her.

The great thing to be minded in education is, what habits you settle; and therefore in this, as all other things, do not begin to make any thing customary the practice whereof you would not have to continue and increase.

Sleep.—Of all that looks soft and effeminate nothing is more to be indulged children than sleep. In this alone they are permitted to have their full satisfaction; nothing contributing more to the growth and health of children than sleep. Let his bed be hard, and rather quilts than feathers. Hard lodging strengthens the parts.

What concerns the body and health reduces itself to these few and easy observable rules. Plenty of open air, exercise, and sleep, plain diet, no wine or strong drink, and very little or no physic, not too warm and strait clothing, especially the head and feet kept cold, and the feet often used to cold water and exposed to wet.

Mind.—Due care being had to keep the body in strength and vigor, so that it may be able to obey and execute the orders of the mind; the next and principal business, is to set the mind right, that on all occasions it may be disposed to consent to nothing but what may be suitable to the dignity and excellency of a rational creature.

The difference to be found in the manners and abilities of men is owing more to their education than to anything else; we have reason to conclude that great care is to be had of the forming children's minds, and giving them that seasoning early which shall influence their lives always after.

As the strength of the body lies chiefly in being able to endure hardships, so also does that of the mind. And the great principle and foundation of all virtue and worth is placed in this, That a man is able to deny himself his own desires, cross his own inclinations, and purely follow what reason directs as best, tho the appetite lean the other way.

The great mistake, I have observed in people breeding their children, has been, that this has not been taken care enough of in its due season; that the mind has not been made obedient to discipline, and pliant to reason, when at first it was most tender, most easy to be bowed. He that is not used to submit his will to the reason of others when he is young, will scarce hearken or submit to his own reason when he is of an age to make use of it. And what kind of a man such an one is likely to prove, is easy to foresee.

Those therefore that intend ever to govern their children should begin it while they are very little and look that they perfectly comply with the will of their parents. If a strict hand be kept over children from the beginning they will in that act be tractable and quietly submit to it, as never having known any other, and if, as they grow up to the use of reason, the rigor of government be, as they deserve it, gently relaxed, the father's brow more smoothed to them, and the distance by degrees abated, his former restraints will increase their love, when they find it was only a kindness to them, and a care to make them capable to deserve the favor of their parents, and the esteem of everybody else.

Thus much for the settling your authority over your children in general. Fear and awe ought to give you the first power over their minds, and love and friendship in riper years to hold it. For every man must, some time or other, be trusted to himself and his own conduct, and he that is a good, a virtuous, and able man, must be made so within. And, therefore, what he is to receive from education, what is to sway and influence his life, must be something put into him betimes. Habits woven into the very principles of his [nature, and not a counterfeit carriage, and dissembled outside, put on by fear, only to avoid the present anger of a father who perhaps may disinherit him.

If the mind be curbed and humbled too much in children, if their spirits be abased and broken much by too strict a hand over them, they lose all their vigor and industry and are in a worse state than the former. For extravagant young fellows, that have liveliness and spirit, come sometimes to be set right, and so make able and great men; but dejected minds, timorous and tame, and low spirits, are hardly ever to be raised, and very seldom attain to any thing. To avoid the danger that is on either hand is the great art, and he that has found the usual, lazy, and short way by chastisement, and the rod, which is the only instrument of government that tutors generally know, or ever think of, is the most unfit of any to be used in education.

I cannot think any correction useful to a child where the shame of suffering for having done amiss does not work more upon him than the pain.

Reputation.—The rewards and punishments whereby we should keep children in order are of that force that when we can get them once to work, the business I think is done and the difficulty is over. Esteem and disgrace are, of all others, the most powerful incentives to the mind when once it is brought to relish them. If you can once get into children a love of credit, and an apprehension of shame and disgrace, you have put into them the true principle which will constantly work and incline them to the right. But it will be asked, How shall this be done?

I confess it does not at first appearance want some difficulty, but yet I think it worth our while to seek the ways (and practice them when found) to attain this, which I look on as the great secret of education.

First, children (earlier perhaps than we think) are very sensible of praise and commendation. They find a pleasure in being esteemed and valued.

But secondly, to make the sense of esteem or disgrace sink the deeper and be of the more weight, other agreeable or disagreeable things should constantly accompany these different states; not as particular rewards and punishments of this or that particular action, but as necessarily belonging to and constantly attending one, who by his carriage has brought himself into a state of disgrace or commendation.

Let your rules to your son be as few as is possible, and rather fewer than more than seem absolutely necessary. For if you burden him with many rules, one of these two things must necessarily follow, that either he must be very often punished, which will be of ill consequence by making punishment too frequent and familiar, or else you must let the transgressions of some of your rules go unpunished whereby they will, of course, grow contemptible, and your authority become cheap to him. Make but few laws, but see they be well observed when once made. Few years require but few laws, and as his age increases when one rule is by practice well established, you may add another.

Habits.—But pray remember, children are not to be taught by rules which will be always slipping out of their memories. What you think necessary for them to do, settle in them by an indispensable practice as often as the occasion returns; and, if it be possible, make occasions. This will beget habits in them which, being once established, operate of themselves easily and naturally without the assistance of the memory. But here let me give two cautions: 1. The one is, that you keep them to the practice of what you would have grow into habit in them by kind words and gentle admonitions, rather as minding them of what they forget than by harsh rebukes and chiding as if they were wilfully guilty. 2. Another thing you are to take care of, is, not to endeavor to settle too many habits at once, lest by variety you confound them and so perfect none. When constant custom has made any one thing easy and natural to them and they practice it without reflection, you may then go on to another.

See, whether what is required of the child be adapted to his capacity, and any way suited to his natural genius and constitution; for that too must be considered in a right education. We must not hope wholly to change their original tempers, nor make the gay pensive and grave, nor the melancholy sportive without spoiling them. God has stamped certain characters upon men's minds, which, like their shapes, may perhaps be a little mended but can hardly be totally altered and transformed into the contrary.

He, therefore, that is about children, should well study their nature and aptitudes, and see, by often trials, what turn they easily take, and what becomes them. Observe what their native stock is, how it may be improved, and what it is fit for. He should consider what they want, whether they be capable of having it wrought into them by industry, incorporated there by practice, and whether it be worth while to endeavor it. For, in many cases, all that we can do, or should aim at, is to make the best of what nature has given to prevent the vices and faults to which such a constitution is most inclined, and give it all the advantages it is capable of. Every one's natural genius should be carried as far as it could; but, to attempt the putting another upon him, will be but labor in vain; and what is so plastered on, will, at best, sit but untowardly and have always hanging to it the ungracefulness of constraint and affectation.

Company.—Company does more than all precepts, rules, and instructions. Considering how great the influence of company is, and how prone we are all, especially children, to imitation, I must here take the liberty to mind parents of this one thing, *viz.:* that he that will have his son have a respect for him, and his orders, must himself have a great reverence for his son; "*Maxima debetur Pueris Reverentia.*" You must do nothing before him which you would not have him imitate.

Always remember that children affect to be men earlier than is thought; and they love breeches, not for their cut or ease, but because the having them is a mark or step towards manhood.

None of the things the children are to learn should ever be made a burden to them, or imposed on them as a task.

Tho it be past doubt that the fittest time for children to learn any thing is when their minds are in tune and well disposed to it; when neither flagging of spirit nor intentness of thought upon something else, makes them awkward and averse; yet two things are to be taken care of : 1. That these seasons either not being warily observed, and laid hold on, as often as they return; or else, not returning as often as they should, the improvement of the child be not thereby neglected, and so he be let grow into a habitual idleness, and confirmed in this indisposition. 2. That tho other things are ill learned when the mind is either indisposed, or otherwise taken up, yet it is of great moment and worth our endeavors to teach the mind to get the mastery over itself, and to be able, upon choice, to take itself off from the hot pursuit of one thing and set itself upon another with facility and delight; or at any time to shake off its sluggishness and vigorously employ itself about what reason, or the advice of another shall direct.

Reasoning.—It will perhaps be wondered that I mention reasoning with children; and yet I cannot but think that the true way of dealing with them. They understand it as early as they do language; and, if I mis-observe not, they love to be treated as rational creatures sooner than is imagined. It is a pride that should be cherished in them, and, as much as can be, made the greatest instrument to turn them by. But when I talk of reasoning, I do not intend any other, but such as is suited to the child's capacity and apprehension. Nobody can think a boy of three or seven years old should be argued with as a grown man. When I say that children must be treated as rational creatures, I mean that you should make them sensible by the mildness of your carriage, and the composure even in your correction of them, that what you do is reasonable in you, and useful and necessary for them; and that it is not out of *caprichio*, passion, or fancy, that you command or forbid them any thing.

* * * * *

Begin betimes nicely to observe your son's temper; and that, when he is under least restraint, in his play, and as he thinks out of your sight. See what are his predominant passions and prevailing inclinations; whether he be fierce or mild, bold or bashful, compassionate or cruel, open or reserved, etc., for as these are different in him, so are your methods to be different and your authority must hence take measures to apply itself different ways to him.

Recreation.—Recreation is as necessary as labor or food. But because there can be no recreation without delight, which depends not always on reason but oftener on fancy, it must be permitted children not only to divert themselves, but to do it after their own fashion, provided it be innocently and without prejudice to their health.

This farther advantage may be made by a free liberty permitted them in their recreations, that it will discover their natural tempers, show their inclinations and aptitudes, and thereby direct wise parents in the choice both of the course of life and employment they shall design them for, and of fit remedies in the meantime, to be applied to whatever bent of nature they may observe most likely to mislead any of their children.

Play-Games.—Playthings, I think, children should have and of divers sorts; but still to be in the custody of their tutors, or somebody else whereof the child should have in his power but one at once, and should not be suffered to have another but when he restored that.

Furthermore, I think, children should have no playthings bought for them.

Nothing that may form children's minds is to be overlooked and neglected; and whatsoever introduces habits and settles customs in them, deserves the care and attention of their governors, and is not a small thing in its consequences.

How then shall the children have the play-games you allow them if none must be bought for them? I answer they should make them themselves or at least endeavor it, and set themselves about it. Till then they should have none, and till then they will want none of any great artifice. A smooth pebble, a piece of paper, the mother's bunch of *keys, or* anything they cannot hurt themselves with, serves as much to divert little children as those more chargeable and curious toys from the shops, which are presently put out of order and broken.

Playthings which are above their skill to make as tops, gigs, battledores, and the like, which are to be used with labor, should, indeed be procured them. These it is convenient they should have, not for variety, but for exercise; but these too should be given them as bare as might be. If they had a top, the scourge-stick and leather-strap should be left to their own making and fitting.

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That which every gentleman that takes any care of his education desires for his son, besides the estate he leaves him, is contained (I suppose) in these four things, virtue, wisdom, breeding, and learning.

I place virtue as the first and most necessary of those endowments that belong to a man or a gentleman, as absolutely requisite to make him valued and beloved by others, acceptable or tolerable to himself. Without that, I think, he will be happy neither in this nor the other world.

God.—As the foundation of this there ought very early to be imprinted on his mind a true notion of God, as of the independent Supreme Being, Author and Maker of all things, from whom we receive all our good, who loves us, and gives us all things. And consequent to this instill into him a love and reverence of this Supreme Being. This is enough to begin with without going to explain this matter any farther, for fear, lest by talking too early to him of spirits, and being unseasonably forward to make him understand the incomprehensible nature of that Infinite Being, his head be either filled with false or perplexed with unintelligible notions of him. Let him only be told upon occasion that God made and governs all things, hears and sees every thing, and does all manner of good to those that love and obey him.

You will find that being told of such a God, other thoughts will be apt to rise up fast enough in his mind about him; which, as you observe them to have any mistakes you must set right. And I think it would be better if men generally rested in such an idea of God, without being too curious in their notions about a being which all must acknowledge incomprehensible; whereby many who have not strength and clearness of thought to distinguish between what they can and what they cannot know, run themselves into superstition or atheism making God like themselves, or because they cannot comprehend anything else, none at all. And I am apt to think, the keeping children constantly morning and evening to acts of devotion to God as to their maker, preserver, and benefactor, in some plain and short form of prayer, suitable to their age and capacity will be of much more use to them in religion, knowledge, and virtue, than to distract their thoughts with curious enquiries into his inscrutable Essence and Being.

Truth. Good-Nature.—Having laid the foundations of virtue in a true notion of a God, such as the creed wisely teaches, as far as his age is capable, and by accustoming him to pray to him; the next thing to be taken care of is to keep him exactly to speaking of truth, and by all the ways imaginable inclining him to be good-natured. Let him know that twenty faults are sooner to be forgiven than the straining of truth to cover any one by an excuse. And to teach him betimes to love and be good-natured to others, is to lay early the true foundation of an honest man. All injustice generally springing from too great love of ourselves and too little of others.

Wisdom.—Wisdom, I take in the popular acceptation, for a man's managing his business ably, and with foresight in this world. This is the product of a good natural temper, application of mind and experience together, and so above the reach of children.

All that can be done towards it during this unripe age is, as I have said, to accustom them to truth and sincerity; to a submission to reason, and as much as may be to reflection on their own actions.

Breeding.—The Indians, whom we call barbarous, observe much more decency and civility in their discourses and conversation, giving one another a fair silent hearing, till they have quite done, and then answering them calmly, and without noise or passion. And if it be not so in this civilized part of the world we must impute it to a neglect in education, which has not yet reformed this ancient piece of barbarity amongst us.

Each man's mind has some peculiarity as well as his face that distinguishes him from all others, and there are possibly scarce two children who can be conducted by exactly the same method.

QUESTIONS.

1. What elements are necessary to aid in giving a child a "sound mind in a sound body"?
2. How should the child be treated, as regards rewards and punishments?
3. How should children be studied, in order to train them to the most helpful and advantageous habits?
4. What points should the teacher bear in mind with regard to his own conduct, in his efforts to train his pupils properly?
5. How far is the teacher responsible for the character and amount of recreation to be enjoyed by children?
6. What are the duties of the teacher as regards training in morals?
7. How far do you agree with Locke, and wherein do you take exception to his suggestions with regard to (a) health, (b) sleep, (c) mind, (d) reputation, (e) recreation, (f) play, (g) moral teaching. Give reasons for your opinions.

History of Art.

Egyptian Art. II.

[Adapted from K. GOEPEL'S "History of Art."]

By FRANCIS C. TURNER.

LET us now turn to Thebes itself, and visit the great temple of Karnak, the largest of all the great monuments of the Egyptian race; this, like almost all the temples whose remains have survived, is the work of the later monarchy. We approach the temple by a broad paved road flanked on either side by sphinxes at short intervals. This approach is nearly a mile in length, and the sphinxes must have numbered upwards of a thousand. Before us we see the pylon fronted by two obelisks a short distance from the gate, and by six colossal figures of the monarch under whom this part of the temple was erected, standing against it. The massive structure of the pylon entirely conceals the temple behind; it consists of a square stone gateway supported on each side by a pyramidal structure of unbaked brick, which rises to a height considerably above that of the gate. These are decorated with reliefs, and like the gate itself are surmounted by a broad projecting cornice. The whole temple is surrounded with high walls of unbaked brick, which have, of course, long since crumbled into a shapeless mass of ruins. These walls entirely concealed the temple from the people without. The privacy of this temple at once strikes us.

"We must beware," says Mariette, "of confounding the Egyptian temple with the Greek temple, the Christian church, or the Mussulman mosque. The temple is not a place where the faithful assemble to offer up prayer in common; no public act of worship takes place here; nobody, indeed, is admitted save the priests and the king.

The temple is a royal act of worship, that is to say, a monument that the piety of the king has caused him to erect, to earn the favor of the gods. It is a sort of royal oratory and nothing more."

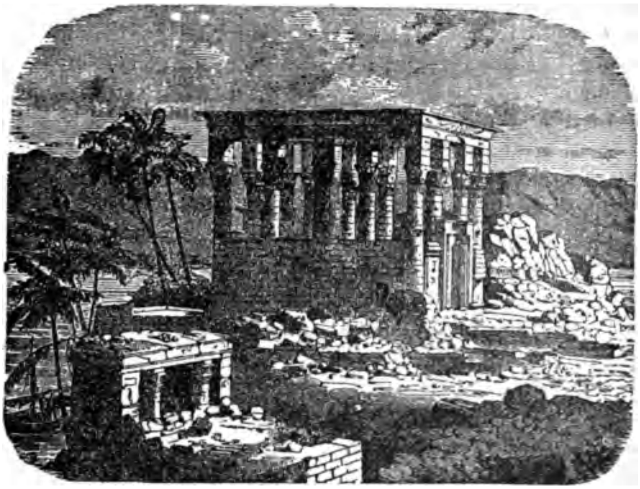
After passing thru the last pylon we find ourselves in the peristyle court, a vast square area surrounded by columns and enclosed by walls. We cross this court between a line of columns, and enter thru a second pylon into the hypostyle hall, the glory of Karnak, and the crowning work of Egyptian architecture. One hundred and thirty-four massive columns support, or rather supported, the ceiling, for the cover has for the most part fallen; a double line of columns more lofty and more massive than the rest form a central avenue. These are the largest columns that have ever been employed in the interior of a building; in circumference they are equal to Trajan's Column, and their height from base to architrave is about seventy feet. The columns on either side are about thirty feet less in height.

Of the size of the hypostyle hall we can form some idea if we reflect that, except for height, Westminster Abbey could easily be placed within it. In the hypostyle hall we find the two principal types of Egyptian capitals, which are known as the lotiform and the campaniform, the former being supposed to resemble a truncated lotus bud, while the latter is sometimes said to represent the same flower in full bloom, but, be that as it may, this spreading bell-shaped capital is the most beautiful invention of Egyptian architecture. Were it not for the small size of the abacus, which rests upon it, it would be inferior to none of the Greek orders. The lotiform capital is by no means so happy; it has rather the effect of an excrescence of the shaft and seems hardly to fulfil the purpose of a capital at all, for the top on which the abacus rests is no larger than the shaft itself. Two other forms of capital—one, which we find at Karnak in the hall of Thoutmes III. in the inner temple, is bell-shaped, with the mouth of the bell downwards; the other consists of a mask of Hathor, the goddess with the head, or, at least, the horns of a cow.

Of the temples of the early and middle empires scarcely any remains have come down to us except that curious temple or tomb close by the sphinx of Gizeh, which Mariette excavated. It is unique among Egyptian temples as being entirely without ornament; its roof was supported by pillars composed of rough rectangular blocks of rose granite which supported a ceiling of slabs of alabaster. For all other knowledge we have of the early architecture we are indebted to the pictures in the tombs. Here we learn that, for a long period, wood and metal were the chief building materials used; we see slender columns—some surmounted by lotus-bud capitals and others by the open lotus flower, represented exactly, with all its petals distinct; even the non-inverted bell form appears here as a natural form of termination for a metal support which fits into a hole in the crossbeam.

From the hypostyle hall we pass into the inner temple which contained the sanctuary. The first part we enter is that known as the Hall of the Caryatides, a hall of little depth, extending the whole width of the building and entirely surrounded by Osiriac pillars. Passing on we come to certain chambers built of rose granite, the central one of which, a narrow chamber lying in the axis of the building, is, by many, supposed to have been the sanctuary itself. Amidst the present confusion of ruins the remaining part of the inner temple can hardly be identified till at the far end we find a kind of repetition of the hypostyle hall known as the Gallery of Thoutmes.

This grand temple is connected by avenues of sphinxes with the neighboring temples of Luxor and Thons. These differ in some details from Karnak, especially in not having a hypostyle hall separated by an inter-columnal wall from the pronaos; at Thons, and, indeed, in most Egyptian temples, the pronaos concludes with a portico of three or four rows of columns, at the back of which is the door leading thru the caryatid hall to the sanctuary. It is impossible to visit all the temples which abound in Upper Egypt and Nubia. The grand temple of Abou Simbel, with its four colossal statues of Rameses II. fronting the pylons, tho more ornate, is not comparable in beauty with the temples of Thebes; the temple of Edfou, which belongs to a still later time, has the advantage of being far better preserved than the temples lower down the river.



THE TEMPLE OF PHILÆ.

Egyptian sculpture by the time of the eighteenth dynasty had submitted to a rigid conventional type. A strict canon existed, which the sculptor followed rather as an artisan than an artist. The conventional attitude of the seated figure, with the arms attached to the sides, the hands spread out on the knees, and the legs attached to the stool, alternates with the equally conventional walking or standing figure, with both feet flat on the ground, one in front of the other. The head and face are of the same uniform type; a type, however, which seems to have been a perfect representation of the race, ancient and modern—the broad, sensual, and slightly protruding lips, the forehead in a line with the upper lip, but separated by no projection from the broad, flat nose, the eye not set deep under the brow, but prominent and turning slightly up at the outer corner, are all to be observed in the Egyptian of to-day. The corners of the mouth, too, have a slight upward inclination, and give the statue a somewhat contemptuous smile. The rigidity of the type may be partly due to the authority of the priestly class, partly to the influence of the material, which, thruout the later empire, was invariably of the hardest kind—granite, syenite, or basalt. The manner in which it was wrought, as we can see from wall paintings, must have been painfully laborious.

The earliest statues of the ancient empire show no signs of this conventional treatment. The wooden and limestone statues, which have been discovered in the early mastaba, are vivid, realistic portraits. This is just what we should expect: the statue in those days was the substitute for the body, the actual and palpable form to which the Kâ might forever attach himself, and was, therefore, an individual portrait. Under the third or fourth dynasty we have the seated figures of Râhotep and his wife, Nefert, the former with deep-set eyes and strongly marked features expressive of great force of will, the latter with round, genial, smiling face. The wooden panels from the tomb of Hosi display the same vigor of characterization combined with exceedingly stiff treatment of drapery. Of all the early work the wooden statue of the schoolmaster at Boulaq is the most striking—a round-faced, well-fed, self-satisfied man, who might be taken for a type of the jovial, self-indulgent friar of the Middle Ages. The fellaheen, who were with Mariette when he discovered it, were so struck with its living resemblance to some local dignitary that it is now generally known as the Sheik-el-Beled. The portrait of the dwarf, Nemhotep, with his long, clumsy body, short legs, and a strangely flattened head, carries the conviction of truthful portraiture. The same excellence is to be noticed in the delineation of the ass, ox, and other domestic animals, and was maintained in regard to them thruout the later periods.

The most interesting of all the early statues is that of King Chephren, a monarch whose name is associated with one of the pyramids of Gizeh. The face is handsome, with strongly marked features and indications of intellectual superiority and commanding character. It is obviously a true portrait, but, unlike the portraits we have seen, it contains something beyond portraiture. The proportions, which exceed nature, the rich decoration of the seat supported by him, the formal disposition of the *claft* (the symbol of royalty in Lower Egypt), which is tied back and falls in broad, flat bands upon the shoulder, the beard of conventional type, are all indications that

the artist has a further aim than a reproduction of the features of Chephren. He gives a striking likeness, but he has already formed an ideal of an Egyptian monarch which he has attempted to realize while giving a truthful portrait. We see here the first effort of the imagination, the first aspiration towards the ideal. From this point it is easy to understand how the conventions that reigned supreme over later Egyptian sculpture became stronger and stronger. A type had been created which satisfied the prevailing conception of the grandeur and dignity of a monarch; the primitive belief in the Kâ, which was the chief incentive to realistic portraiture, became fainter, and, henceforth, no deviation from the prevailing type could be permitted.

QUESTIONS.

1. Describe the temple of Karnak. For what was it used?
2. To what other sources are we indebted for our knowledge of early Egyptian architecture?
3. What is meant by the terms (a) pylon, (b) architrave, (c) hypostyle, (d) lotiform, (e) campaniform, (f) abacus, (g) pronaos, (h) caryatid?
4. What was the conventional type of Egyptian sculpture?
5. To what was the rigidity of the type probably due?
6. Give the characteristics of the early statues of the ancient empire.
7. What is the most interesting of all the early statues? What are its distinctive characteristics?
8. Of what special interest is the study of ancient Egyptian art to us?
9. What was the relation of the lotus to Egyptian art? What similarity may be traced between Egyptian and early Greek art? (See cyclopedia, or a history of art.)
10. What was the character of the belief in the Kâ?

For Pedagogic Discussion.

Effects of Alcohol.*

THE study of the results of alcoholism, as a cause of human degeneracy ought to be of the highest interest to psychologists. Recent experiments made by students of physiology and psychology show very accurately the effects of over-indulgence in this stimulant. The following are among the facts established by these experiments.

1. The effect of alcohol differs with different people. It is especially injurious to those who are of nervous temperament, to young people, and above all to children. Every drop of the spirit taken by any person of these three classes produces an undesirable effect. The stronger the dose and the oftener it is taken, the more harmful is the result. This is true in persons having the strongest constitutions.

2. The doctrine that alcohol warms the body is false. As a matter of fact, it paralyzes the blood-vessels of the skin, thereby forcing the warm blood to the surface. Thus warmth is actually given out, and the temperature of the body is lowered.

3. Alcohol does stimulate both tired and fresh muscles to greater activity. Its favorable influence in this connection is felt almost as soon as it is taken, but the effectiveness lasts for only a very short time. About a half hour after the spirit is taken the action of the muscles is reduced to a minimum. It can be excited again only by another dose of the alcohol, and at times this is not effective.

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*This article is an adaptation from a scientific work on psychology recently published in Germany. In some way the author's name was omitted from the advance pages sent to the editor.

This paralyzing effect of alcohol is by no means balanced by the temporary stimulation it gives at first. Recent studies show that under the influence of even small amounts of the spirit, the capacity for work is less and its quality deteriorates.

4. Granted that alcohol drinking gives rise to pleasurable sensations; these are only ephemeral. While the stimulant increases the force of the heart-beat, it paralyzes the cells of the brain and even alters their structure.

5. Alcohol is injurious to the psychic functions of the nervous system. They do not immediately cease to act as a result of its use, but like the cells of the brain they become disordered and are finally completely destroyed.

It is apparent from what has already been written, that alcohol gives rise to numerous forms of mental disease. The following are its most serious results:

1. The alcohol habit diminishes one's ability to think clearly, and decreases the acuteness of the organs of sense.
2. It retards the process of thought, and increases the difficulty of committing facts to memory.
3. It decreases the number of mental achievements and lowers their quality.
4. It weakens the intellectual powers and makes careful consideration impossible.
5. It makes the association of ideas a purely mechanical process, dependent on merely external phenomena.
6. The state of temperament becomes very uncertain. The emotions are altered and often perverted. Tactfulness, pleasure in what is elevating, interest in high ideals are appreciably lessened.
7. The moral sense is impaired. It becomes difficult to distinguish between right and wrong. The rules for honest action seem vague. The will-power is weakened. In short, the creature of the alcohol habit becomes demoralized.

8. The desire to act increases while, at the same time, it becomes more and more difficult to decide on the course best adapted to bring about the desired end. The inclination to act impulsively, without consideration or aim makes the alcohol drinker liable to commit crime More intoxicating spirits are drunk on holidays than during ordinary week days, and the number of crimes committed on holidays is proportionately larger.

Probably one of the most deplorable phases of the alcohol-habit is its effect on succeeding generations. Investigations have established the following facts:

1. Elements of every form of degradation may be transmitted—with diverse variations and complications—from generation to generation. The alcohol habit of parents is the chief cause, or, at least, one of the causes of the weakness or degenerateness of at least one-third of all those who are weak or abnormal from either a physical or mental point of view.

2. The evil effects of alcohol-drinking are only temporary and effect only the drinker, himself, when the spirit is taken in moderation. If, however, it is drunk daily, these ill effects become chronic weaknesses which the next generation will be apt to inherit. These inherited weaknesses do not always assume the same form. Parental alcoholism may show itself in the next generation in the form of epilepsy, or it may assume the form of chorea, imbecility, or degenerateness of character. Its result may be merely an idiosyncrasy; it may be a defect; it may be utter degeneracy.

3. When several generations of a family have been addicted to the alcohol habit each succeeding generation is affected more seriously. If the first shows merely a tendency to commit occasional indiscretions, the later generations may be utter degenerates. Their moral and physical weaknesses increase until the family becomes extinct.

4. Alchohol drinkers are an enormous expense to the state. Prof. Pelmann Bonn has proved by actual figures that in Germany, several generations of a single family of drunkards have cost the state 5,000,000 marks. This amount was expended in maintaining their degenerate offspring in penal and other institutions, where society might be protected from them.

It is worth while to study the children of drunkards not only as they are found in insane asylums, compulsory educational institutions, and prisons, but also in public schools.* Only in exceptional cases—when they are blessed by wise mothers who have trained their mind and heart—do they evince special ability. They are usually lacking in force of will and power of resistance.

In the kindergarten the effect of their parentage is not very evident; at this stage there is little apparent difference between such children and the offspring of more temperate parents. But the higher they advance in school the greater is their mental and moral weakness. This weakness increases more or less rapidly, according to the degree of the intemperance of their parents.

QUESTIONS.

1. What harmful physiological effects of alcohol can you enumerate? Explain.
2. What are some harmful psychic effects? Explain.
3. What are the results of the alcohol habit upon succeeding generations?
4. Why does the mental and moral weakness of the children of intemperate parents become more marked the higher such children advance in school work?
5. What duties devolve upon the teacher with reference to the instruction of children concerning the effects of alcohol? Outline a reasonable practical course of procedure.

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*Delitsch *Über* den Alkoholgenuss von *zöglingen einer Hilfsschule.*

Teachers' Examinations.

Training Class Certificates.

(January 20, 21, and 22, 1903.)

GEOGRAPHY.

1. Define oasis, plateau, estuary, river basin, isothermal.

2. What is the latitude of a place 10° north of the tropic of Capricorn; 6° south of the Arctic circle? Name three cities near the tropic of Cancer.

3. Name in order the rivers a person would navigate in going by boat from Wheeling, W. Va., to Bismarck, N. D. Name and locate five cities that would be passed in making this journey.

4. Compare the state of Vermont with the state of Louisiana as to area, surface, climate, character of inhabitants, productions.

5. *a*. Name four cities of the British Islands that contain a noted university. *b*. Mention four manufactured products of Great Britain and a city that is noted for the production of each.

6. What and where is each of the following: Crete, Algeria, Yucatan, Ganges, Genoa.

7. Mention four widely separated localities noted for the extensive production of wheat, three for rice, and three for beef cattle.

8. Write upon the following topic: Extent and character of work to be covered preliminary to the use of a text-book.

9. What work should be done preparatory to teaching the industries of a country?

ANSWERS.

1. An oasis is a fertile spot in the midst of a desert.

A plateau is an elevated plain or broad mountain top, often broken or bordered by ranges of mountains.

The mouth of a river which is wide or bay-like is called an estuary. An estuary usually occurs where the river empties into a strong tidal sea.

A river basin is the country thru which the river and all its tributaries flow.

An isothermal is a climatic band where the temperature is of marked equality.

2. 13½ degrees south; 60½ degrees north. Havana, Mecca, and Calcutta.

5. A natural interest is one that exists without voluntary effort on the part of anyone. An acquired interest is one developed by education.

6. The mental images of the school building in its various aspects will result from direct sense perception. The images of St. Peter's will be formed as a result of the study of verbal descriptions or photographs—in other words the image will be built up with the aid of sense perception, association, comparison, imagination, and judgment.

7. By being tidy, dainty, and tastefully decorated.

8. It depends upon the character of the matter acquired. The method, in so far as judgment is required, is likely to be analytic. If the matter is to be acquired thru observation, the method will usually be synthetic.

9. It is pretty difficult to remember exactly what one's concept of a fish was in early years. Probably the present concept includes the former one plus what comes from additional knowledge together with exercised judgment.

10. A concept is a notion of objects grasped together thru common properties. Induction is the method of reasoning by inferring generals from particulars. Retention is the capacity by which knowledges are figuratively said to be kept in the mind, out of consciousness, for reproduction.

A habit is a tendency or inclination toward an action or condition, which by repetition has become easy, spontaneous, or even unconscious. Abstraction is the mental operation in separating qualities or attributes from the substance in which they inhere, or in contemplating them as thus separated.

HISTORY OF EDUCATION.

1. *a.* What were the characteristic features of Egyptian education? *b.* In what ways were the Greeks indebted to the Egyptians in education?

2. State how Grecian learning was introduced into Rome and show its influence there.

3. Mention two prominent educators connected with the early Christian church and state the views advanced by each.

4. Give an account of the origin and rise of universities.

5. Give a summary of educational progress during the sixteenth century and mention the causes contributing to it.

6. Describe the educational movement with which Francke was identified.

7. Goethe called the Emile the "nature gospel" of education. Show the appropriateness of the title.

8. Who wrote *a.* the Orbis Pictus; *b.* the Novum Organum; *c.* the Tractate on Education? What are the main features of two of them?

9. With what name do we specially associate *a.* object teaching; *b.* apperception; *c.* education thru activity?

10. Trace the history of state supervision of education in New York.

ANSWERS.

1. *a.* It was suited to the special needs of the several castes. Principal subjects taught in lowest caste were writing and mathematics. The occupation he was to follow had some influence in shaping a boy's education.

b. For knowledge of mathematics, astronomy, some art ideas, and many other things which we suppose came from Egyptian civilization to Greece.

2. Grecian learning was introduced into Rome in several ways, especially (1) thru the travel and study of young Romans in Greece; (2) thru Roman conquests in Greece and the consequent removal of Greeks to Rome as slaves. Greek influence in Rome showed itself in the increasing love of the Romans for beauty and luxuriance, and in the deterioration of the stern, sturdy, old Roman manhood and womanhood.

3. *a.* Chrysostom: Teacher must lower himself to capacity of his pupils in order to educate them; (2) foundation of true education is the Christain life and example, therefore teachers and parents must walk circumspectly; (3) religious instruction is essential.

(*b*) Basil the Great: Misdeeds should be so punished as to tend to correct the fault; (2) the Bible should be the chief text-book; (3) children, while young, should be taught right precepts.

c. Clement of Alexandria: (1) Faith is the cornerstone of knowledge; (2) Mosaic law and heathen philosophy are parts of the same truth, Christianity is fulfillment of law and philosophy.

4. See EDUCATIONAL FOUNDATIONS, for March, 1903, page 399.

5. The sixteenth century marked the removal of the stage of educational activity from the shores of the Mediterranean to the north of the Alps, the invention of printing, and the Reformation. It was, as well, the period of discovery. All these conditions had marked influence on education. Books were printed instead of written, and therefore became much more common, the discoveries stimulated interest in geogra-

phy and the outside world, and the reformation became a reformation in education as well as in religion.

6. Francke's great work was the founding of educational institutions dependent upon philanthropy for support. At the time of Francke's death, 3,200 persons were connected with the various institutions. The results attained attracted attention in all parts of Europe.

7. Rousseau's Emile was the study of what the author considered the ideal education of a boy. Rousseau believed in training a boy in accordance with his natural bent and according to his nature; hence Goethe's suggestion of its being a "nature gospel."

8. *a.* Comenius; *b.* Bacon; *c.* Milton. The "Orbis Pictus" was the first picture book for the systematic instruction of children. In the "Novum Organum" Bacon sets forth his great educational discovery the "inductive method" which revolutionized science and suggested the application of the forces of nature to the wants of man.

9. *a.* Comenius. *b.* Herbart. *c.* Froebel.

PHYSIOLOGY.

1. Into how many groups are the bones of the skeleton commonly divided? State approximately the number in each group.

2. Distinguish between the following terms: physiology, hygiene, anatomy. Illustrate each as applied to the eye.

3. Define food. Mention the three classes and give an example of each.

4. State how the blood is affected by *a.* respiration; *b.* absorption; *c.* assimilation; *d.* oxygenation.

5. Define ligament, tendon, ganglion, narcotic, stimulant.

6. The skin is sometimes called the third lung. Explain.

7. Draw a cross-section of the spinal cord showing the distribution of the white and the gray matter and the attachment of the motory and the sensory nerves.

8. In what topics of this subject is it especially desirable to use the microscope?

9. Outline a lesson on bones to illustrate their three uses and the adaptation of structure to function.

10. Mention some concrete illustrations that may be used in teaching respiration.

ANSWERS.

1. *a.* Three—head, trunk, and limbs. *b.* Head, 28; trunk, 54; limbs, 124.

2. *a.* Physiology is concerned with the functions of the body, hygiene with its care, anatomy with its structure. (*b*) The physiology of the eye concerns itself with the process of carrying the light from the retina to the optic nerve; the hygiene of the eye tells how to preserve the sight, and the anatomy describes the parts, as the pupil, retina, iris, sclerotic coat, etc.

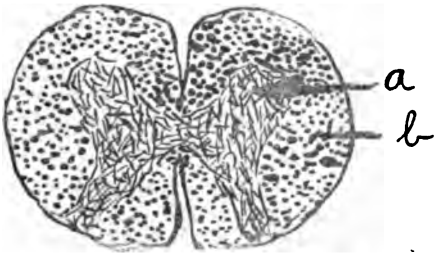
3. *a.* Any substance which being taken into the body serves, thru organic action, to build up normal structure and supply waste tissue. *b.* Albuminoid, grains; fibrinous, meat; casein, milk.

4. *a.* Respiration supplies the red blood corpuscles with oxygen and removes the carbonic acid gas. *b.* By absorption of oxygen the blood changes from blue to red. *c.* Assimilation supplies the blood with lymph. *d.* See answer to *b.*

5. *a.* Ligament: A band or sheet of firm, compact, fibrous tissue, closely binding related structures together, especially one connecting the opposed surfaces of a joint. *b.* Tendon: One of the strong bands or cords of connective tissue forming the terminations or connections of the fleshy portion of a muscle. *c.* Ganglion: A nodular enlargement consisting of an aggregation of nerve cells, that receives and sends out nervous impulses and serves to stimulate organic and physical action. *d.* Narcotic: A substance that causes stupor, as opium. *e.* Stimulant: Any agent which excites increased organic action in the nervous system, or acts directly upon the tissue.

6. Because it throws off impurities, as the lungs do thru the breathing of oxygen, the skin is often called the third lung.

7.



8. In connection with study of the skin, hair, respiration, etc.

9. Have ready cross and longitudinal sections of a bone (to be obtained at a market.) Have pupils discover for themselves the use of bones in producing motion; have them find the bones that protect important organs; have them observe how the bones form the framework and give shape to the body. Name the framework "skeleton."

Have pupils find and locate long bones, short bones, heavy bones, light bones, flat bones, thin bones. Observe their adaptation to use.

Study external features of a bone, observing shape, knobs, enlargement at joints, hardness, smoothness, color.

Study cross section of long bone, observing hollow structure. Determine which will bear most weight, a solid rod or a tube of the same material and weight. Compare structure of cross section of long bone with that of a thin, flat bone.

Study longitudinal section of long bone. Observe cavity, marrow, hard surface, and spongy structure of joints. Determine purpose of peculiar structure.

Make drawings of cross and longitudinal sections of bones, showing general features.

(Adapted from Mrs. Hallock's "Lessons on the Human Body," published by E. L. Kellogg & Co.)

10. *a.* Watch the rising and falling of the chest as air passes in and out of lungs. *b.* Observe breathing movements of dogs, cats, etc. *c.* Illustrate breathing by experiment with lamp chimney and piece of sheet rubber.

SCHOOL MANAGEMENT.

1. What means would you employ to awaken the interest and secure the co-operation of parents in school work?

2. In a school-room containing 600 square feet of floor space, which is the better form 24 feet by 25 feet or 20 feet by 30 feet? Why?

3. What are the benefits that a school derives from athletic games? What precautions should be observed in supervision?

4. Pupils are sometimes permitted to work together in the preparation of lessons. State why this should not become a general practice. If allowed at all, what should be the conditions to justify it?

5. What advantages are claimed from having pupils pursue a variety of subjects at the same time?

6. Mention essentials to the formulation of a proper method for teaching any subject.

7. Discuss the advisability of giving reasons for establishing a rule of order.

8. How may the spirit of emulation be used to advantage in school work?

9. Explain how the work to be taken up in recitation should determine the character of the questioning. Illustrate.

10. Show that the personality of the teacher is an important factor in school discipline.

ANSWERS.

1. Interest and co-operation may be aroused by the teacher's calling upon and getting acquainted with parents; by talking with parents about the studies and general welfare of children; by inviting parents to visit the school; thru mothers' or parents' meetings.

2. The room 20x30 feet is better *a.* on account of the seating, it allows better arrangement of seats and aisles; *b.* ventilation is more easily arranged; *c.* it is easier for a teacher to keep track of what pupils are doing with fewer rows of seats, than in a room nearly square.

3. *a.* Athletic games are an aid to school spirit and loyalty; they are conducive to health if not carried too far; they furnish an outlet for the superfluous animal spirits, and so fit pupils for steady, quiet work in the school-room. *b.* The teacher should supervise the games sufficiently to prevent quarreling or unpleasant feeling, or danger to pupils' safety or health; but the supervision should not be carried far enough to lessen pupils' interest, or so that the players feel that the games are part of the regular school work.

4. Pupils should not be allowed, generally, to study together, because they are apt to lose their self-reliance and independence in work by so doing. If, however, one child is a little ahead of the grade, or learns lessons more quickly than his companions, he may be allowed to assist another child who has been absent, or for some other reason is a little behind his classmates.

5. (1) Change from one subject to another adds to the child's interest; (2) by turning from one subject to another he can do more studying in the day than if his work were confined to two or three branches; (3) in case he is obliged to leave school early, he has at least some little knowledge of many of the subjects he will be expected to understand in later life.

6. (1) Knowledge of the subject; (2) experience in teaching it; (3) sufficient tests of the subject to warrant the drawing of correct conclusions.

7. In general, no rules should be established for pupils to

obey which they do not clearly understand. Children are reasoning beings, and there should be no rules, as a general thing, which must be obeyed that pupils may not understand and the reasons therefor. In this way confidence in the teacher and the authorities behind the school is established, so that if—and such occasions should be rare—some unexplained rule must be established, pupils will be ready to trust the authorities sufficiently to obey it.

8. Emulation may be employed in many ways in school work. The desire to excel is inborn, and this in itself is not undesirable. But the desire to excel should be the purpose, not the desire to outdo one's mates to their disgrace, or for the sake of flattering one's pride.

9. Questions as employed by teachers are of three kinds: (1) Experimental questions are used to sound the depths of the pupil's previous knowledge and prepare him for the reception of further teaching; (2) the question employed in actual instruction, to exercise the thoughts of the learner, and compel him to share in giving himself the lesson; (3) examination questions, by which the teacher tests the work, to see whether the lesson has been thoroly learned.

10. The personality of the teacher is *the* important factor in school discipline. The successful disciplinarian is calm, quiet, decided. No rules will make pupils obey a teacher who loses his temper. Discipline is dependent upon the love and respect of pupils, and their desire to obey. This desire must be created by the teacher, thru the strength and power of his own personality.

CIVIL GOVERNMENT

1. Mention two purposes for establishing the national constitution as set forth in the preamble, and show that the desired end has been reached in each case.

2. What is a city? On what basis and into what classes are the cities of this state divided? Why?

3. Define charter, impeachment, quorum, bail, citizen.

4. What is meant by joint ballot? Mention the officers elected by joint ballot of the legislature.

5. Mention two classes of officers representing the United States in foreign countries, and outline the duties of each.

6. Give the usual items of town expenditure and two sources of town revenue.

7. What is the object in the appointment of committees in legislative bodies? Name three standing committees of the state legislature.

8. Explain the general character of the first ten amendments to the national constitution. When and why were they adopted?

9. Show the advantages and the disadvantages of the present system of trial by jury.

10. State the advantages of teaching civics from the historical standpoint.

ANSWERS.

1. A more perfect union and to provide for the common defence. Before the adoption of the constitution there was practically no union and no capable central government. At present the union is very strong thru a highly centralized central government. The common defence has been provided for, as is shown by the Wars of 1812, the Mexican war, and the war with Spain.

2. A municipality of the first class, governed by a mayor and aldermen, who work under a charter. All cities are classified according to the latest state enumeration, as from time to time made as follows: The first class includes all cities having a population of 250,000 or more; the second class, all cities having a population of 50,000 and less than 250,000; the third class, all other cities. They are divided for administrative purposes.

3. Charter: An act of a legislature incorporating a municipality, company, institution, or the like, and specifying the purposes and privileges thereof.

Impeachment: The calling to account for crime or misdemeanor, especially the accusation and arraignment of a high civil officer before a proper tribunal.

Quorum: Such a number of persons of any deliberative or corporate body as is necessary for the legal transaction of business.

Bail: The security or guarantee given, or the amount fixed or agreed upon in ordering or in becoming a surety for the debt, default, or miscarriage of another.

Citizen: A member of a nation of sovereign state; one who owes allegiance to a government and is entitled to protection from it.

4. *a.* A joint ballot is a ballot of the two houses of the legislature combined. *b.* Superintendent of public instruction, nineteen regents of the University of the State of New York, and United States senators.

5. *a.* Minister: He is the representative of the government at a foreign court to treat of affairs of state. *b.* Consul:

Consuls are officers in foreign countries for the protection of trade and the vindication of the rights of merchants, and who keep the home government informed of facts bearing on the commercial interests of the country.

6. *a.* Schools, roads, law suits, support of paupers, destruction of nuisances, and the exercise of the corporate government of the town. *b.* Fines of courts and taxes on real estate.

7. *a.* The committees systematize the work of the whole body and allow each case to be carefully worked out as to its merits by some members at least. This is the only system under which business could be transacted. *b.* Finance, ways and means, and judiciary.

8. The first ten amendments are in the nature of a bill of rights, adopted in 1791, to assert and guarantee the inherent rights of the people.

9. Impartiality is secured, but on the other hand the system is cumbersome, the guilty may easily escape, the requiring of a unanimous decision gives room for corruption and the misuse of power, and many of the jurors are often too ignorant to understand the questions they decide.

10. It broadens the student's outlook and makes his comprehension of the subject more complete.

LANGUAGE AND GRAMMAR.

1 We will go so far as to risk an opinion that when Napo-
2 leon returned from Elba he had realized that his career as
3 a conqueror was over. In Elba he had had leisure for the
4 first time since he attained power, to take stock, calmly
5 and coldly, of his situation, and to remember his own maxim
6 as to the limited period of life during which war can be
7 carried on with success.

1. Make a list of all the clauses in the above exercise, giving the principal elements (subject and predicate only), and classify each clause.

2. Give the mode, tense, and syntax of each verb in the second sentence.

3. Parse *when*, line 1; *over*, line 3; *first*, line 4; *period*, line 6; *which*, line 6.

4. Give the possessive plural of *commander-in-chief*, *judge*, *hero*, *lady*, *child*.

5. Correctly use in sentences the present and past tenses of *flee*, *fly*, *flow*, *eat*, *sit*.

6. Correct the following sentences and state reason for each correction:

Who do you take me to be?
Which do you prefer more, apples or oranges?
Speak low and distinct.
A variety of pleasing objects charm the eye.
Where did you say Gettysburg was?

7. Give five rules for use of the comma and illustrate each.

8. Write an account of some recent event in your own experience, using not less than 150 words.

9. Give an outline to be followed in analyzing a sentence.

10. State what use you would make of the following seleciton in language work.

ANSWERS.

1. *We will go,* principal clause. *Napoleon returned,* temporal dependent clause. *He had returned,* subordinate appositional clause. *Career was over,* dependent objective clause. *He had had leisure,* principal clause. *He attained power,* dependent temporal clause. *War can be carried on,* dependent adjective clause.

2. *Had had,* indicative mode, pluperfect tense, third person, singular number, to agree with its subject *he. Attained,* indicative mode, past tense, third person, singular number to agree with the subject *he. Take* and *remember,* infinitive mode, present tense, adverbial, temporal. *Can be carried on,* potential mode, present tense, third person, singular, to agree with its subject *war.*

3. *When* is a conjunctive adverb of time; it connects the clause *Napoleon returned* with *he had realized. Over,* an adverb modifying *was. First,* a numeral adjective modifying *time. Period* is a noun, neuter gender, singular number, third person, objective case (principal word in the prepositional phrase introduced by *as to*). *Which,* relative pronoun connecting *period* with the clause that follows; *period* is its antecedent, and it is in the objective case as the object of *during,* the phrase *during which* being an adverbial prepositional phrase of time.

4. Commanders-in-chief's, judges', heroes', ladies', children's.

5. I *flee* from danger; I *fled* from danger. The bird *flies;* the bird *flew.* The river *flows;* the river *flowed.* We *eat* breakfast; we *ate* breakfast. The cat *sits* by the fire; the cat *sat* by the fire.

6. *Whom* do you take me to be; *whom* should be in the objective case, in apposition with *me.* Which do you prefer, apples or oranges; *more* is superfluous, as the word *prefer*

indicates the comparison. Speak low and *distinctly; d tinctly* modifies *speak,* and should have the adverbial forı A variety of pleasing objects *charms* the eye; *variety,* tl subject of *charms,* is singular. Where did you say Getty burg *is;* the town still exists, and the continuous prese should be used.

7. *a.* Nouns in apposition, when accompanied by modifyi words or phrases, are separated from the rest of the senten by commas, *e. g.,* Longfellow, the poet, lived at Cambridg

b. A noun independent by address must be set off by comma or commas, *e. g.,* John, hold the horse.

c. A phrase formed by a noun and a participle must set off by a comma or commas; *e. g.,* the weather bei stormy, we will not go out.

d. Three or more words used as a series, in the same co struction, are set off by commas; *e. g.,* The tall, awkwar ungainly boy stumbled as he walked.

e. Words used in pairs take a comma after each pair; e.g Toiling or resting, awake or asleep, we must breathe.

8. A special answer required.

9. *a.* Select principal, then subordinate clauses. *b.* Gi subject and predicate of each clause. *c.* Show the relati of each subordinate clause to the principal clause or clause *d.* Show the relations of all minor words in each clause to tl subject or predicate of the clause.

10. Special answer required.

SCHOOL LAW.

1. Mention three causes for which a teacher's contract m be rendered and null and void.

2. What qualifications must a teacher possess in order be approved by the state superintendent as a training cla instructor?

3. State three provisions of the law providing free schola ships at Cornell university.

4. Mention two state, one county, and two town office who have official connection with the common school syste of the state. Give one duty of each.

5. In what two ways may a vote be taken at a school mee ing for an appropriation or a tax?

6. State the provision of the compulsory law relating the suspension of pupils.

7. Who is the legal custodian of all school district record books and papers? What is the law regarding their i spection?

8 When and to whom does the trustee make his two written reports?

9 What are the limits of age entitling *a.* a pupil to attend school free of charge; *b.* the district to draw public money for a pupil's attendance?

10. State four reasons for which public money may be withheld from a school district.

ANSWERS.

1. Incapacity to teach, cruelty, closing school without the consent of the trustees.

2. A standing of 75 per cent. in the examinations in the following of subjects: American history, arithmetic, composition, geography, grammar, orthography, penmanship, physiology, hygiene, reading, school law, civil government, current topics, drawing, methods, school economy, art of questioning, and the history of education.

3. The institution shall annually receive students to the number of one from each assembly district in the state, free of tuition fees or incidental expenses. These scholarships shall be awarded by competitive examination of candidates by the school commissioners and city superintendents of each county. None are eligible but those who have attended some of the common schools of the state at least six months of the year immediately preceding the examination.

4. Superintendent of public instruction has entire charge of teachers' institutes. State treasurer pays school moneys to county treasurers. County commissioner certifies to the supervisor of each town the amount of school moneys apportioned to each district. Town supervisor: Custodian of the school moneys of the town. Town clerk: Must keep all maps, records, papers of his office pertaining to common schools.

5. For levying a tax or appropriating money a vote must be by ballot, or by taking and recording the ayes and nays.

6. See the law.

7. *a.* The town clerk. *b.* They are inspected by the county commissioner.

8. Trustees give annual reports to the town clerk for the county commissioner on the first day of August.

9. *a.* Between five and twenty-one. *b.* Five to eighteen.

10. By omitting to make any report, thru failure to enforce the compulsory law, to provide sanitary equipment, or wilful failure to close school during institute week.

History of Our Times.

In nearly all the states a knowledge of current affairs is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

(See *Our Times* for April 1 and April 15.)

What is the present status of the Panama canal treaty? Under what conditions is work being carried on at the isthmus?

What are the chances of reciprocity with Cuba?

Give the principal points in the report of the commission in regard to the anthracite coal strike.

Describe, in brief, the career of Clara Barton.

What important political change has lately been made in Finland?

In what way is it proposed to settle the landlord and tenant question in Ireland?

Give a sketch of an English churchman who lately died.

What reforms were proposed by the czar, in a recent manifesto?

What are the claims of the United States and Canada respectively as to the boundary of Alaska?

What efforts have Austria and Russia made to get reforms in Macedonia and with what result?

Where did President Roosevelt stop on his Western tour, and on what subjects did he speak? How did he say the United States must uphold the Monroe doctrine?

Describe an apparatus made by a French physician for the production of speech.

What is Marconi's latest success in wireless telegraphy? Describe the Cape Cod station.

What are the characteristics of Death Valley?

Trace the route of the American cable across the Pacific?

Where was the deepest water in the Pacific found?

EDUCATIONAL FOUNDATIONS is a magazine of Pedagogy. It is published monthly, from September to June inclusive, at $1.50 a year, and is sent to its subscribers regularly until ordered to be discontinued and paid for in full. We also publish THE SCHOOL JOURNAL, weekly, $2.00 a year; THE TEACHERS' INSTITUTE, monthly, $1.00 a year; THE PRIMARY SCHOOL, $1.00; and OUR TIMES, 50c. a year. Subscribers to two or more get club rates, sent on application. We also publish about 400 Standard Teachers' Books and Aids, and keep in stock all the best of such books of all publishers; also all Recitation and Dialog books published, Blackboard Stencils, Teachers' Aids, etc. Catalogs free. Orders may be sent to New York, Chicago, or Boston, as is most convenient, but all subscriptions should be sent to our New York office. E. L. KELLOGG & CO., The Educational Building, 61 East Ninth Street, New York. Entered at the Post Office as Second-class Matter.

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Vol. XIV. No. 10   Monthly, $1.00 a Year

JUNE, 1903

EDUCATIONAL FOUNDATIONS

A Monthly Magazine of Pedagogy and General Culture for Teachers, Normal Schools, Training Classes, Reading Circles and Home Study

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From the Educational Publishing House
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Educational Foundations

Ossian H. Lang, Editor.

VOL. XIV. JUNE, 1903. No. 10

Development of Teachers.

(Continued.)

[This is Number IX of the series on "School Administration."]

By CHARLES B. GILBERT, New York.

THE course of study is with us in America the universal, and, necessarily, the first method or means for developing teachers. Left in its printed form its usefulness will necessarily be very limited. Some teachers will read it and interpret it correctly; some will read it and interpret it ignorantly; some will read only portions of it, the work in particular relating to their own grades; and some will scarcely read it at all.

The various methods resorted to for the fuller interpretation of the course of study, and for instructing the teachers as to its administration, are of two general kinds,—written or printed syllabi, and meetings of various sorts. The syllabi are merely expansions of the course of study itself. If the course of study is at all elaborate in design, and especially if it is suggestive rather than restrictive, such syllabi are quite necessary. They are usually in the form of discussions as to the teaching of the different subjects in the curriculum, and if clear and explanatory they are very useful.

There is danger, however, that the supervisors will think that the superintendent's course of study is too liberal and so will attempt in syllabi to restrict it and to give in minute detail instructions for carrying it out. This is a danger easily avoided, however, if the superintendent is alert.

Little needs to be said upon the subject of syllabi ex-

Editorial announcements will be found on page 598.

cept that they should be in the nature of commentaries rather than positive and definite instruction as to details. This, however, is necessarily a matter of judgment, and in some school systems, particularly after the adoption of a new course of study or after a change of administration, it is wise to make the earlier syllabi quite specific in order to avoid, as far as possible, all floundering and loose, aimless experimentation which one sometimes sees in school. Such syllabi, however, should be followed at the earliest possible moment by others which are expository and which deal in principles.

The general rule might be laid down here that all instruction to teachers, whether given in meetings or thru syllabi, should deal in educational principles. The instruction, however minute, should be traced back to its philosophical source, so that the teachers may be continually receiving training in the thought that authority determines little or nothing, but that all sound advice rests upon fundamental, indisputable principles.

The most common instrument of the supervising force to train teachers without destroying their freedom is the teachers' meetings. Of these there are many sorts of varied degrees of usefulness. The particular kinds of meetings that should be employed in any locality, of course, must be determined by local conditions. No general law can be laid down on this point, but the general principle can be emphasized that all meetings for the teachers should be educational, and it is surprising how the educational principles that we insist upon for the training of children apply in the training of teachers, and also how generally they are disregarded. The following are the various kinds of meetings in common use:

General or mass meetings.
Grade meetings.
Meetings of teachers of adjacent grades.
Subject meetings.

Round table meetings.
Classes for definite instruction.

These meetings vary, of course, as to the constitution of the audience and as to the instructors. I will speak in detail of a few of the more important ones:

The General Meeting.

Every school system should have a few general meetings in the year, but only a few. They should be wholly meetings for stimulation and inspiration. In general, they should be addressed by the superintendent or some of the supervisors, or better yet, by some person of ability in a special line, not connected with the local school system, who can put the teachers into touch with prevailing educational thought,—with the world beyond the local field.

The interests of teachers and their needs are so various that the general meeting can supply only a very limited amount of the help needed, only that which all teachers of all grades need in common. It is of great value for teachers once in a while to be brought into the presence of a vigorous thinker, particularly if he belongs to a different school of thought from that dominating the school system. Such meetings tend to make broader and better teachers, but they do not supply the need for instruction which is necessarily felt by all good teachers, for it must be borne in mind that the only teachers who do not feel the need of assistance are the poor ones.

Grade Meetings.

Perhaps the most useful of all the classes of meetings is the grade meeting well conducted. The teachers of a single grade have very specific and common needs, and it is easy for the conductor to meet these needs. Meetings may be conducted by the superintendent or by the supervisors, or by teachers of special subjects. If the meetings are short, as those held after school must be, it is usually well to devote the time to the consideration of some one subject as taught in a particular grade. Whenever possible, the teachers themselves should take part in the discussion, both to make known their needs and their prevailing views. Talking to teachers is quite frequently talking in the dark. The speaker necessarily assumes a state of mind in his audience. If he assumes the wrong state of mind, then his talk is largely wasted. The supervisor and the superintendent talking to teachers in grade meetings should have an advantage over most speakers, in that they are supposed to know the conditions which they must meet, but frequently this is not the case. Meetings so conducted as to encourage free expression on the part of the teachers—especially on the part of those who are supposed to be a discordant element, out of harmony with the views of the administration, are apt to be very helpful meetings. Any supervisor should be glad of an expression of diverse opinion. If his views are sound he ought to be able to defend them in debate. No one has all the truth, and a comparison of opinions usually results in a nearer approach to it than any individual alone can attain.

A very helpful plan is to have a class taught before the meeting. This is more easily done in the lower grades than in the higher, because the children are less likely to be conscious, and are more likely to do the natural and regular thing. If possible, such a class should be conducted by a good teacher who is in accord with the educational theories of the superintendent, and it should show good work and natural work. The class should not be drilled beforehand so as to make a good appearance, but should do the kind of work that is ordinarily done by it in the school. After the lesson is over and the class dismissed, there should be a very full and free discussion of the methods employed. The teacher who conducted the class, and the presiding officer, should

:eady to answer all questions, explain all methods, and ;e clear any reason for anything done that was not le clear by the representation itself. I have found , to be a most excellent plan for explaining a course tudy,—the concrete is so much more easily compreded than the abstract.

ometimes as superintendent I have wondered if I had the power of using the English language. My ;ructions and explanations, given in what seemed to at the time, the simplest and most lucid language, e been interpreted in so many ways. We approach ost all subjects with a prejudice. It is practically ossible for a mind to be absolutely open, so that 'ds produce very different effects upon different ıds. Language is at best a very imperfect medium the expression of thought, and we necessarily intert that which we see and hear according to our own ;e of mind and pre-conceived notions. A failure to)gnize this fact is largely responsible for wide differes of opinion, for so-called heresy, for religious perseion, and often for war. Teachers are not exceptional his respect, and I have often seen the most absurd struction put upon my own course of study and have n held responsible for the most foolish educational ctice, which had never even occurred to me as pose, because of the false interpretation of the printed rse of study. The teachers' meeting in which the ıs has been presented has often served to clear up se clouds and send the teachers away with a better lerstanding of the whole scheme of work.

t might be said in passing that another excellent way accomplish this result is to send teachers who do not lerstand to visit those who do, that they may see the :k going on regularly in the class-room. I recall the ror with which sand tables and the use of construc- were first viewed in one city to which I had come as superintendent. They seemed to people who did not know how to use them as foolish toys for the wasting of the time of the children, but just as soon as a few of the brighter teachers comprehended the value of such illustration, and the practical result of the employment of motor activities, we had centers for the diffusion of knowledge. The tables showing the illustrations of history stories and geographical phenomena were brought before grade meetings and explained. Other teachers were encouraged to visit those who were using these tools intelligently and in a very short time the entire misconception passed away and the majority of the teachers of the city had a fairly clear notion of the use of constructive work for illustration purposes. It would have taken years of ordinary talking and writing to accomplish the same result.

The work of the grade meeting should be specific and clear, one thing at a time being made plain. The teachers should go away feeling helped and stimulated. If the average teacher goes away from a meeting bored, there has been something wrong with the meeting. Superintendents and supervisors conducting meetings need to be especially careful to avoid tedium. It is so easy to become enamored of the sound of our own voices that we hold helpless bodies of teachers, as the teachers themselves hold helpless bodies of children, in bondage while we enjoy ourselves in talking. The talky, talky superintendent or supervisor is the *bete noire* of the profession.

A very valuable kind of meeting is the subject meeting. That is, a meeting for the discussion of some particular subject in the curriculum. These meetings are for the discussion of the principles underlying the teaching of the subject as a whole, and should not be confined to grades. For instance, it is a good thing to gather a group of teachers of all grades teaching geography and to discuss the principles of the subject fully as applied to all grades. One of the dangers of the graded system of schools is of the narrowing of teachers. Teachers who give instruction to children of a single grade very soon learn the rigmarole of the course and usually fall into the routine and cease active intellectual effort. Their views are likely to be limited to the giving of a small section of instruction to children of approximately the same attainments. Now, it stands to reason that no teacher can do the best work in any grade who does not have a comprehensive view of the scope of the subject. A teacher who is to teach third grade geography needs to have, not merely a knowledge of what is taught in the third grade, but a broad view of the subject of geography as a whole, its educational and practical value, the principles that underlie instruction in it, andthen to decide what portion of this subject matter and what amount of instruction is needed by her own children. The teacher who merely knows the work of the grade and has no comprehensive view of the subject is like the mechanic who drives rivets and knows nothing of the machine which he is constructing. It makes all the difference between the artist and the artisan.

Another kind of meeting, with partially the same object, is the meeting of adjacent grades. The fourth grade teachers, for instance, should meet occasionally with the third grade teachers and occasionally with the fifth grade teachers. That is, they should "look before and after," whether they "pine for what is not," or not. They should know the general characteristics of the children who are coming to them, and, in particular, the kind of training they are receiving, and they should know, also, what is expected in the next grade, so that their work may fit into the general scheme and be most useful. Such meetings of teachers of adjacent grades are especially important in the higher grades. Teachers, in particular, of the highest grammar grades and the lower high school grades, should meet at not infrequent intervals for a discussion of principles in common. One of the great troubles that the school superintendent has to meet and adjust is the continual complaint of the teachers of the higher grades that the teachers of the grade below have not properly done their work and that the children come to them unprepared. This, of course, is merely due to difference in standard and a failure to comprehend the preparation that has been given. Such complaint is particularly common when pupils pass from one institution to another, as from the grammar school to the high school, and from the high school to the college, and it portrays, more than anything else, ignorance on the part of the high school teachers and of the college teachers of what has been done. The emphasis has been put upon what has not been done, and little effort has been made to discover the other. If the teachers could be brought together a mutual understanding could easily be effected and much friction and much loss to the children be saved.

At these meetings, sometimes, it is well to discuss particular subjects, as, for instance, English. At others, to discuss the general character of the pupils who pass, the teachers of the higher grades telling frankly the defects which they discover in pupils who come to them, and the teachers in the lower grades telling what they have done for the children who are coming along, and what may be expected from them. The value of such meetings, I think, needs no full discussion, but, so far as I have been able to observe, their recognition is not common.

Special Classes.

It often becomes necessary for supervisors and teachers of special subjects to give specific instruction to teachers in various subjects. Sometimes all the instruction that is needed in any particular line can be given in the grade meeting. Sometimes this is insufficient. Teachers, for instance, cannot teach music or cannot teach drawing, and are a constant source of annoyance. What shall be done with such teachers? Shall they be excused from attempting to teach these subjects? or shall they go on and teach them badly? Neither seems very desirable. I have found that classes conducted by competent supervisors have been most helpful. I have found that usually all that has been needed has been to offer such classes for voluntary attendance. The teachers usually have been distressed by their inability to do their full work and have gladly availed themselves of the opportunity to improve. Sometimes it has become necessary to insist upon a particularly weak teacher, who was particularly self-satisfied, attending these special meetings. Such meetings, naturally, may be held in the afternoon, sometimes, even, in the evening, because the teachers realize that they are getting, simply for the effort of attending, valuable instruction in some important art.

Meetings of Principals With Their Teachers.

Meetings of this kind should be held regularly and not infrequently for various purposes. For instance, that the teachers of the school may become acquainted with one another. That they may know the work of the grades above and below. That there may be unity and harmony in the general scheme of the school, that individual and troublesome cases may be discussed, and that advice or instruction from the supervising authorities may be expounded. It is also well for principals, if the schools are not too large, to take up some specific study with their teachers; something either of general cultural value or professional cultural value. Circumstances will determine which is better. In most cases I believe that a book of professional cultural value—some work on psychology or educational principles makes the best subject for such study.

The need for meetings is not limited to the teachers. The superintendent should conduct meetings of his immediate assistants or supervisors, and especially of the principals of the schools. The meetings of the superintendents and supervisors necessarily are for the discussion of general plans of work and to make sure of the existence of harmony in the administrative force.

Meetings of superintendents and principals, however, are perhaps more than any others the key to the educational situation. They give the superintendent an opportunity to impress himself upon the leading minds engaged in actual school work. The time consigned to these meetings is precious and should not be spent in an idle discussion of minor details. Sometimes it becomes necessary for the superintendent to take time in a meeting to explain some administrative regulation, or some matter of comparatively small consequence, but the danger is that all the time will be taken up in this way. I have often found it very much better to send out written or printed instructions as to these matters of detail, and to devote the time of teachers' meetings to educational discussion.

It is well to take up with the principals the course of study and to discuss its underlying principles, its philosophy, its educational aim. If these meetings can be upon the round-table plan of general discussion, that is very much better. Of all meetings these should be the freest, and the principals should be encouraged to tell what they think. The superintendent should not take to himself all of the talking. The topic being assigned, it is well to have some principal lead the discussion and others follow. The superintendent presiding should put in a word here and there if necessary in order to keep the discussion in the right line, and should usually close. All kinds of subjects may be discussed at such meetings, which relate to the work of the schools; sometimes a particular topic, such as arithmetic or grammar; sometimes a method, such as the various methods of teaching reading; sometimes a new book, or a new theory in education, such as the value of motor activities, but these meetings should be especially educational and should tend to bring about theoretical and actual harmony in the educational system. I count this one of the most important meetings, for principals will, and necessarily must, largely dominate their own schools, and if the superintendent can get the sympathy and active co-operation of the principals as to his educational ideas and their administration, he has won the day. And if his ideas will not stand a fair discussion in a body of reasonably intelligent principals, it will be well for him to revise them.

In general, voluntary meetings are better than required meetings for study, but in most systems it is necessary to have most of the meetings with compulsory attendance. It is to be borne in mind that what I have said here as applied to the city system would need a slight modification if the system is very large and divided into districts. In such a city as Chicago, Boston, or New York, for instance, the various kinds of meetings which I have described should be conducted in each of the districts, the district superintendent and his asssistants taking the place of the general superintendent and his associates. In such systems, however, the general superintendent should try to exert a similar influence upon the body of district superintendents, and should also meet occasionally in mass meeting the principals of the city. No city is too large to admit of this.

Now as to the time of conducting these meetings. Commonly they are held after school or on Saturdays. After school the teachers are physically and intellectually fagged and are not in condition to get the best from the teachers' meeting. I admit that sometimes it is absolutely necessary to hold meetings after school, especially meetings in the buildings and meetings for special instruction. On Saturday the teachers are necessarily not so tired, but Saturday is the teachers' holiday. They, especially those of the gentler sex, want to go shopping or have mending to do, and they begrudge the morning given to teachers' meetings. They are apt to come in not the best frame of mind and go away without the best results.

It is a generally accepted principle in most of the states that institutes may be conducted for several days in each year during school time, the schools being closed and the teachers required to attend. This is a perfectly sound principle, and in all cases where the institutes are well conducted the schools are, in the end, the gainers, but this principle has not been applied generally in cities having their own system for the instruction of teachers. I contend that the same principle should apply there. The important teachers' meetings should be held during school hours, when the teachers are fresh and consider themselves on duty, the schools being dismissed for that purpose.

The most effective, and, on the whole, the most useful system of grade meetings that I have myself tried has been as follows: The schools of a single grade, as the first or eighth, are dismissed for the day. The teachers assemble in a central place and are given a solid day's hard work. I have usually divided the day into four periods: two in the morning and two in the afternoon—varying the work. One period, for instance, being taken by the superintendent in discussion of history; one by the supervisor of music for her particular subject; one by the supervisor of drawing for her subject; and the fourth by the superintendent, or a supervisor, upon some other theme. Take one day a week and one grade at a time, and it is possible, easily, to get around the grades of a system four times a year, thus giving four full days of instruction to teachers. I have found that more could be accomplished in these four days of instruction than in any number of after-school meetings or Saturday morning meetings, and I heartily recommend the plan. It would be necessary, of course, to educate boards of education to an appreciation of the value of such meetings so that they will consent to the closing of the grade.

The Institute.

A word in regard to institutes, so called. It is to be regretted that most of the principles here laid down are not recognized by those who have charge of state and county institutes. The average institute is simply a literary and educational debauch. People are gathered together without much regard to unity of interest, and, in many cases, all teachers of all grades, from the kindergarten thru the high school, meet three times a day for several days in succession, and listen to talk upon all sorts of subjects. The value is comparatively little because the needs of the individuals are so seldom met. Indeed, in some states, the institute work has become largely a joke. The institute directors are expected to go around with a bag full of funny stories and jokes, more destructive than the winds of Æolus, and blow them off upon the teachers who are gathered to hear them. In one of the larger states it is practically impossible to get serious work before the teachers in these occasional institutes. The only acceptable man is the joker. The teachers come together for a junket and for a good time. In so far the meeting is profitable, but only in so far. Institutes should be conducted as meetings of teachers in cities should be—with regard to the specific needs of those who gather—and provision should be made for all sorts of meetings, as here outlined, or as many as possible. I believe that state superintendents and county superintendents generally thruout the country need to give themselves to fasting and prayer and careful deliberation over their institutes.

Fuller Utilization of a Public School Plant.

By PRES. CHARLES W. ELIOT, of Harvard University.

[Epitome of an address before the Department of Superintendence of the National Educational Association.]

SCHOOL-HOUSES may be said to be used about six hours a day during one-half of the days in the year, Sundays, vacations, legal holidays, and Saturdays, or two half-holidays in each week, having been deducted from the total number of days in the year. So partial a use of an industrial plant would never be thought possible. No productive industry could be successfully carried on with so incomplete a use of an expensive plant. Yet public education ought to be the most productive of all industries, and its plant should be more fully used than any other. It is as true of the country as it is of the city that school-houses are used but a small portion of the working time of an industrious population.

What sort of a school plant can best be completely utilized? In the first place, it cannot be expected that ordinary school buildings should contain machinery or other elaborate tools. No exceptional equipment is expected. The problem is to utilize more fully the ordinary school-houses provided for the first eight grades, as well as the high school buildings. The first requisite is the means of brilliant lighting. When, but a short time ago, it was proposed to utilize in the evening several of the Boston school-houses, it appeared that most of these buildings had no adequate means of lighting. Here is an initial expenditure. In the next place, a school-house which is to be used twelve hours out of the twenty-four, will need some rooms which are not completely occupied with fixed desks and chairs. It will need some rooms which can be used for such exercises as drawing, modeling, dressmaking, embroidery, cooking, and basketry Again, it will need an assembly-room provided with seats which adults can comfortably occupy, and this room should be provided with an electric lantern and the accompanying fixtures. Lastly, no school-house can be made as useful to the public as is possible, unless it has a yard, playground, or roof-garden. The yard or playground need not necessarily be immediately attached to the building; it may be a little removed if the access to it be convenient. Thus, relatively cheap back land, instead of front land, can be utilized for the yard or garden.

A recent report of the commissioner of labor at Washington contains a great body of evidence concerning the serviceableness of evening schools all over the civilized world, and one interesting feature of this exhibit is the large proportion of private and endowed enterprises in this field. Trade schools were first established in the United States by private benevolence, and the newer schools of this sort, like the Lick and Wilmerding schools at San Francisco, have the same origin.

Another evidence that the local institutions of public education fail to meet a widespread and large demand for instruction may be found in the extraordinary development of schools of correspondence which has taken place in our country during the last ten years. It is hard to imagine a more disadvantageous way of getting instruction than the occasional receipt of typewritten directions and comments from a remote instructor who has never seen his pupils, but, nevertheless, over three hundred thousand persons are at this moment maintaining correspondence with one such school in this country, and these persevering and ambitious pupils are scattered all over the United States in both city and country. Unable to get what they want at their homes they pay considerable sums for this extraordinarily uninviting and unaspiring sort of instruction.

Evening Schools.

I turn now to a description of the work which a fully utilized school plant might do, and the first branch of this part of my subject is evening schools. Evening schools, like vacation schools, are in our country of private origin, and in many cases religious or philanthropic associations started them. Fifty years' ago I was a teacher in an evening school in Boston, which was carried on by an association of churches in that city. All the teachers were volunteers. The equipment was very meager and the physical surroundings deplorable, but it was good pioneer work and showed the way toward the somewhat ample organization of evening schools which now makes part of the Boston public school system.

The fundamental idea of the evening schools is to continue and supplement for individuals the school training which was too early broken off. They are continuation schools. They are schools for boys and girls who have already worked many hours during the day. Experience seems to have proved that for such pupils, so occupied during the day, manual and laboratory subjects and methods are to be preferred to book methods. Such pupils can be taught from things better than from words and phrases. They can more easily attend strenuously to exercises which involve the use of the hands as well as of the eyes. In such schools the elective or optional method is indispensable, for the pupil gets more profit from a simgle subject than from many, and that single subject should be one which naturally enlists his interest and zeal.

It is interesting to observe that the present program of the Boston Evening High school is a longer and richer program than is provided for the day high schools, and that the system is thoroly elective, not only for short-term pupils, but for the long-term pupils who seek the diploma of their school.

The evening schools offer a continuation of instruction to boys and girls who have been obliged to leave school at the conclusion of the eighth grade, or even earlier. They offer additional instruction to boys who have been obliged at too early an age to become apprentices in shops and factories.

The evening school ought to be a refuge and refreshment for an apprentice. The objection to apprenticeship is that the interest of the shop or factory is constantly in collision with the interest of the apprentice. It is the interest of the shop that the apprentice should learn to do a few things well and stop there; it is the interest of the apprentice to learn to do many things and to understand many more—to comprehend a whole machine and not that part only to the production of which he day after day contributes. The evening school should enable him to widen his knowledge; to understand principles as well as practice, and to escape from the contracting influence of automatic repetition.

The moment we come to consider what the subjects are which may be most profitably taught during the evening in our, at present, unoccupied school-houses we shall see that some modification of the arrangement of the rooms and of the furniture in the rooms will ordinarily be needed. There will be needed, for example, rooms in which conveniently to teach drawing, both free-hand and mechanical. It is by practice in drawing, and particularly in free-hand drawing, that the intelligent young artisan may most easily be brought to unite artistic and technical capacity. After drawing come clay-modeling, pattern-making for the parts of machinery, and the experimental study of electricity and electrical apparatus, as useful subjects for boys in the evening schools, and for girls sewing, cooking, household economics, dress-making, millinery, and embroidery. All these arts have much educational as well as industrial value; they train the mind as well as the hand, and they may all impart habits of accurate observation, just reasoning, and moral rectitude.

Vacation Schools.

The next enlargement of the use now made of school buildings should be their use for vacation schools, not for a short term of four or five weeks, but for seven or eight weeks during July and August. Vacation schools, like evening schools, were first established by private enterprise and with a view to keeping children off the streets and giving them congenial and improving occupations. They have been adopted by some American cities and have uniformly succeeded wherever adopted, but they ought to become a regular part of every urban school system, and they should be as numerous and as well-sustained as the public schools which are open the rest of the year, altho the resort to them will not be so large as it is to the ordinary schools maintained from September to July. In these schools the instruction should chiefly concern things and not language, just as in the evening schools. The pupils need something to do with their eyes and their hands; hence, the same subjects which are used in evening schools should form the staple of instruction in vacation schools. In many cases the evening school teachers from September to June can be employed for the vacation schools, for this staff can very well take its vacation in June.

Manual Labor and Moral Training.

We should not imagine that either the evening school or the vacation school is to be regarded as play; on the contrary, both are real work. Both provide a serious mental training, and both ought to have an excellent effect on the moral quality of their pupils. The pupils' minds should gain in accuracy of observation and clearness of conception. The cultivation of good judgment in productive labor may be more successfully carried on in manual operations than in mathematical operations or in the study of languages. Whatever illustrates and inculcates good judgment in work during youth will add to the industrial efficiency of the nation when the youth become adult. There is no well-directed manual labor or laboratory work which does not give valuable training in the power of application, in the capacity to give keen attention and to grasp quickly and firmly the gist of the matter under consideration. This power of application may be as well developed in the classes appropriate to an evening school or a vacation school as it can be in the classes appropriate to an ordinary day school; indeed, for some minds this invaluable power of application can be developed only thru manual training and laboratory processes.

I have said that there is strong moral training in the work appropriate to evening schools and vacation schools. Let me illustrate this proposition: To make a true joint between two pieces of wood or a true socket for a square stanchion is a process in which may be displayed all degrees of accuracy in planning and of conscientionsness in work. As a test of honesty in labor I know nothing better than the preparing of a plane piece of metal, proved to be plane by the application in all directions across it of a veritable straight-edge. The foreman of a school shop in which such work is done has, in my opinion, better means of ascertaining the moral quality of the pupils under his charge, with all its various shadings and gradings, than the teacher has in an ordinary schoolroom where language, geography, and history are taught. In all good workmanship there is a large element of morality, and this fact comes out very strikingly in every evening school and vacation school where the proper manual and laboratory subjects are utilized. This is a strong argument in favor of vacation schools; for the contrast between the kind of mental and moral training which they supply and the effect on idle children of the sights and sounds of thronged city streets is a very striking one.

Social Center for Adults.

The next additional use of school-houses is evening use for adults as well as children. This use is described by the phrase "the school-house an educational center." It regards the school building as the center of various instructive entertainments offered gratuitously to the people of the neigborhood, but particularly to the families and friends of the school children. These entertainments comprehend singing classes, performances by local choruses, bands, and small orchestras, readings of poetry, fiction, travel, and the drama by good readers, men, women, or children; the acting of simple plays by children or adults, and lectures, illustrated by the lantern, on architecture, sculpture, city government, landscape, history, biography, the useful arts, and social questions.

The illustrated lecture has in recent years been brought to great perfection, and has become a very interesting and profitable mode of teaching. It used to be laughed at as an easy method, fit only for children and other inattentive persons; but it has firmly established itself as superior in all subjects to any written lecture without illustration, not only for popular audiences, but for university audiences. Nowadays even Latin and Greek cannot be taught well without the lantern as a means of illustration. All the sciences need it, and the teaching of history can be effectively vivified by it.

For these instructive entertainments in great variety the assembly-room of all modern school-houses can be advantageously used four or five nights out of every week from the first of November to the first of may.

In a densely populated city the school-house can thus be made the center of an active, intellectual interest for persons of all ages, from the child of fourteen to the grandmother and the grandfather. The school-house should be the most active social center of the neighborhood, kept so by the interest in the music, recitations, plays, readings, and illustrated lectures which there can be enjoyed. This work needs a sympathetic director who knows how to enlist in it all the available talent of the neighborhood and much outside talent besides.

If it be objected to this suggestion that it is a new function for the public school to provide pleasures for the populace, I reply that the adding of pleasures, joys, and satisfaction to human life ought always to have been recognized as the principal function of every school and of all education.

Open School Playgrounds.

Finally, the school yard or playground ought to be utilized by the neighborhood whenever the school is not in session. For this purpose the playground ought to be decorated at its borders with vines and shrubs, and provided with seats. It should, of course, have a large asphalt or gravel surface, in order to secure quick movements of the children during recesses, and this surface should be accessible for free games to all the children of the neighborhood, when the school is not in session. There ought also to be provided in every school yard sand-boxes in which babies can play at all times of the day when the weather is mild. The mothers of the neighborhood should be encouraged to come and sit in the school yard with their babies or little children, whenever the weather permits. In short, the school playground should be an open-air parlor for the neighborhood, and should be kept accordingly with perfect tidiness and with the utmost possible provision of pleasant objects for the eye on and about the neighboring walls and buildings

It is astonishing how much can be done to adorn commonplace or even dilapidated and forlorn buildings by means of vines, hanging baskets, and window-boxes, and it is often easy to interest the occupants of such buildings in this sort of decoration, particularly if they belong to any Latin race, or have come from the southern half of Europe.

Every such playground would require careful watching by a man who had the double duty, first of keeping it tidy, and secondly of seeing that nothing rude was done there. It is an axiom that every piece of public ground, large or small, must be effectively policed.

All this larger use of school playgrounds involves an expenditure of money. But such expenditure is the only true economy. It is an abominable waste to use a very costly piece of open city ground only during the recesses of a day school. Such breathing-places should not be used for any highly competitive sports in which the few play and the many look on; they should be chiefly used for free, spontaneous, active games which require very little apparatus and no elaborate training.

These remarks apply most directly to city-school playgrounds. Your own minds will suggest the modifications which would be needed in the country. The surroundings of a country school ought to be beautiful. They should be thoughtfully contrived to exhibit successive beauties as the season of the year advances; and they ought to make ample provision for quick-moving spontaneous games. A fortunate movement to this end is already well-advanced in various parts of the country, and we hope that before long Whittier's description of the country school as "a ragged beggar" will no longer be applicable.

I have made in this discourse not a single original or novel suggestion. Every idea or plan I have mentioned has already been put into execution in some part or other of the United States. What I have desired here to urge is that the full utilization of a public-school plant is the only true economy; that the present inadequate use of school-houses is wasteful precisely in proportion to the costliness of the grounds and buildings, and that reform in this respect means a larger and better yield, physically, mentally, and morally, from the public schools, and therefore a significant addition to the health and wealth of the nation and to the public happiness.

QUESTIONS.

1. What economic considerations argue strongly for the extension of the use of the common-school plants?
2. Give a brief sketch of the origin of evening and vacation schools in the United States.
3. What new social duties are revealed to the leaders in the common school field by the development of large correspondence schools?
4. What is the fundamental idea of evening schools, and what should be their plan of work?
5. What opportunities and special training should be supplied by the vacation schools? (Give reasons for your answer.)
6. How may schools and school grounds be rendered attractive? (What reasons are there for attending to this matter with great care and unwearying solicitude?)
7. President Eliot says: "There is no well directed manual labor or laboratory work which does not give valuable training in the power of application, in the capacity to give keen attention, and to grasp quickly and firmly the gist of the matter under consideration."—Discuss the reasonableness of this proposition and deduce from it suggestions for the organization of school courses of study.
8. What are the moral effects of well-directed manual training? Illustrate by examples.

(Continued on page 607.)

Pleasure as an Educational Influence.

By H. Holman.

THE subject is such a wide and deep one that it will be impossible to do more than endeavor to work out a suggestive outline for further thought. For the purposes of this discussion we shall define education in its practical form as: systematic efforts to develop and guide self-realization; self-realization being understood to mean the growing into the best that it is possible for the individual to become at any given moment—the possibility of such a development being more or less clear to the mind of the individual, and being desired and striven for by him. Pleasure we define as: normal activity under normal conditions of mind and body. In other words, whenever a healthy and sound mind is acting in a proper way, under conditions which are most appropriate and most helpful, then the mere fact of such activity gives—in fact, is in itself—true and intense pleasure. Whatever mind and body can do, if done without any element of excess or defect, will under proper conditions, give pleasure.

The activity is always a very real thing; that is to say, whilst there is no sense of strain or burden, there is full energizing of what may be called the full average force of the mental strength. Just as a healthy person, in good training will find that walking too quickly, or too slowly, gives a sense of discomfort and strain, whilst a brisk, vigorous rate of progression, which avoids these and is well within, but up to, his powers, is exhilarating and invigorating—if not too long continued—so a sound and healthy mind realizes itself best when working up to, but not beyond, its full capacity.

Dr. James has well said that "victorious assimilation

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*Substance of a paper read before the London College of *Preceptors*.

of the new [that is, successful mental activity] is the type of all intellectual pleasure." Until the element of pleasure is secured, the mind is not working at its best or doing the most of which it is capable, either with regard to the quality or quantity of the product. If, therefore, we can know what are the best conditions under which the normal activities of mind and body can best exert themselves, and can, further, find means of securing the presence of such, we shall be best able to assist in developing and guiding the processes of self-realization, *i. e.*, to educate.

A Closer Analysis.

It is well to definitely recognize that in so far as mind exists it exists as a form of activity—like all other organisms. That is to say, when the mind entirely ceases to be active it is dead; and in so far as it is inactive in so far it fails to be normal. Mind and body are working machines, and most fulfill themselves when they are doing their best work. All activity has two phases—that is, it really involves action and reaction. There is, therefore, the receiving and giving out of activity. These we usually speak of as two forms, considering the one as passive or receptive, and the other as active (proper) or aggressive, according to whichever element seems to us to predominate. But it is important to always remember that they are but two phases of the same thing—viz., an instance of activity. From the point of view of purely mental activity we speak of assimilation and discrimination, and these two terms have roughly, the same meaning as those used above. And it is probably true to say, that, taking the life as a whole, the properly active state of mind predominates.

Now mental activities, in these fundamental forms of assimilation and discrimination, concern themselves with the following great psychical processes:—*sensing* (the receiving and appreciating of sensations), perceiving and *apperceiving* (the giving definite meanings to sensations, binding these into wholes and joining these wholes into classes and systems—*e. g.*, horse as a thing and class, quadruped as a system of things); *conceiving* (the establishing these meanings into purely mental wholes, or ideas), and *reasoning* (the relating of ideas into judgments and these into systems of ideas, *e. g.*, the science of psychology). Underlying and regulating these we regard the general activity of mind as itself a process, and speak of it as the process of willing. Assuming that the mind with which the educator has to deal is normal, *i. e.*, is sound and healthy to an average degree, it only remains for us to secure the best conditions for these forms of activity in order that the 'greatest pleasure and effect may be produced.

Since the native activity of mind itself is the all-important and all-embracing element, the first point to be considered is: how to direct this, or, in other words, how to best influence the will. We must, therefore, at the very outset, manage to supply some condition which will appeal to the mental nature, and so become what we term a motive, *i. e.*, a moving and directing influence. Whatever so appeals to the mind is said to interest, or be interesting to, it. Hence the aim is to so interest the individual that the whole mental energy is directed to a given end. For this to be the case there must be no sense of compulsion, since, whenever there is such, a certain amount of energy (often very large) is expended in resistance. As far as possible, therefore, the motive should be a free one—that is, it should derive its force so much from the aroused desire of the individual that all the outer elements of suggestion, direction, and control are practically lost sight of. Also the motive must be a strong one, for no languid interest will command our greatest energy. It is of course, a commonplace of experience that languid interest soon produces ennui, whilst keen interest always involves more or less pleasure.

In the case of young children the motive should be *personal.* Indeed, it is necessarily so, for the most part, in that young children, as a rule, have not developed the altruistic feelings. In any case motives have a strong personal reference, for even altruism is but the realizing of our own altruistic tendencies and desires. But with children the personal view may be rightly emphasized. And, finally, with young people, the motive must be as *immediate* as possible, for remote ends are hard for them to appreciate, and, therefore, little likely to be strong. If these conditions of willing can be secured, there is every probability, so far as the mind itself is concerned, that its activity will be at its best.

But, as has been pointed out, every case of activity involves both action and reaction. Hence things that act upon the mind, and upon which it reacts—or those upon which it acts, and which react on it—must also be conditioned, so far as may be. That is to say, the materials which are dealt with in mental workings must be such, in quality and quantity, as will most minister to effective work. In sensing and perceiving, the materials will be objects and those physical activities connected with them which give rise to our sensations, and the mental appreciations which interpret them. For conceiving and reasoning, the material will be those abstracted mental interpretations, regarded as things in themselves, which we name ideas. The materials should in every case be appropriate to the end aimed at. And this appropriateness will involve selection, for otherwise childish ignorance will often lead to wasted effort, disappointment, and loss of interest. But with the right material the interest is likely to accumulate and intensify, as success gathers and the end approaches complete realization. Next, the material should be sufficient, and not more or less than sufficient, so as to avoid waste of energy whilst fully securing the end. And it ought, also, to be striking, *i. e.*, by the force of its own nature it must definitely and strongly appeal to the perceptual or conceptual activities.

The processes of mind and body which have to be gone thru should be simple, coherent, dependent, interdependent, and conclusive. We must try to present only one step at a time, and to cause each new step to lead out of that which precedes and into that which follows. Thus will they be simple, coherent, and dependent, in the sense that they secure complete and explicit wholes, which are connected with each other. This is represented by the analysis and synthesis of an individual, and the arranging of individuals into classes. Then if the subject-matter is complex, the dependent parts will have to be interdependently related to each other. And the result ought to be a finished whole which is clearly and definitely realized in itself, and marked off from other wholes. And, lastly, the products should be satisfactory, *i.* e., the objects or ends ought to have, if possible, some practical value, for mind or body, or both. This is very well illustrated in sloyd, where the completion of certain processes always results in some useful and artistic object. If this can be secured, the ends will also, and therefore, be pleasurable. Not only is there a pleasure in the activity, but also a more or less permanent source of pleasure in the outcome. And the element of permanence is in itself most desirable and satisfactory.

In so far as we can secure the above conditions for mental activity, we shall, on the assumption that mind itself is sound and healthy, undoubtedly secure the most pleasurable and effective forms of mental work.

Fatigue.

One of the most important conditions for pleasurable *activity, i. e.*, normal activity, is that the organ itself possesses normal vigor. But the vigor of an organ is constantly exhausted by activity, and, therefore, it is essential that steps should be taken to avoid continued, or normally intense activity when the vigor of the mind is beginning to decline below the average level. Fatigue is the deadly enemy of pleasurable and effective activity. There is in the mind, as in the body, a cycle of increasing maximum, and declining power; and we must know, at least roughly, when the mind has reached its maximum (*i. e.*, when that intensity at which it is working its hardest, without any sense of strain or without discomfort is reached), how long it can continue this, and when it has definitely passed this limit. For only by knowing these things can we hope to be able to establish and maintain pleasurable states of activity.

Some interesting experiments by German educationists go to show how intervals of rest influence the maintaining of the maximum efficiency. Dr. J. Friedrich, of Wurtzburg, has "experimented with a class (fifty) of children, ten years old, testing accuracy by having them write from dictation difficult sentences and calculate arithmetical problems. These experiments were made under the following conditions:—(*a*) Before the beginning of morning session; (*b*) after the first hour's work; (*c*) after the second hour, with a rest of eight minutes between the first and second hours; (*d*) after the second hour, but with no rest; (*e*) after the third hour, with rests of fifteen minutes between the hours; (*f*) after the third hour, with rest only between the second and third hours; (*g*) after three hours, with no rests; (*h*) beginning of the afternoon session; (*j*) after one hour; (*k*) after two hours, with a rest of fifteen minutes between the first and second hours; (*l*) after the two hours, but with no rest. The percentage of errors rose from the most favorable condition (before the morning session), when it was 2 per cent. to 17 per cent. after the condition (*g*).

The latter was reduced almost by half when the rests were taken, condition (*e*). The afternoon session showed the same general results, but the fatigue was here more rapid after the second hour, condition (*l*) there being the same percentage as there was for the condition (*g*) in the morning, thus showing that the noon recess did not give a complete rest. The practical conclusions drawn by the speaker from his experiments were (1) that continual work for sixty minutes is too long. (2) That between the hours there should be a rest of at least ten minutes; these pauses might be filled with bodily exercises, breathings, &c. (3) The afternoon session (if there should be any) should consist only of light work—writing, drawing, singing, &c."

Other experiments, by different persons, generally confirm these results, and the deductions. Their value is very great in deciding such points as proper length of lessons, alternation of exacting and restful subjects, decreasing length of lessons, the choice and use of definitely pleasurable subjects, and the fixing of recreative intervals (drill, singing, play, &c.) For by the right use of such means we can best secure the continuance of normal activity, *i. e.*, of the most pleasurable and effective working of the mind.

Some Practical Aids.

The purely pleasurable side of learning may be specifically cultivated by introducing less formal, amusing, and purely entertaining lessons into school-work. Thus a short time may now and again be given to puzzle and general-knowledge competitions, and the inspection and appreciation of the best work (which has real merit, however small) of previous pupils. When a class has achieved some special merit in its singing, or recitation, it might be allowed to perform before another class, or the rest of the school. Pupils' reading circles, circulating books, club, and school magazine (manuscript or printed) are excellent sources of profit and pleasure. All these should be almost entirely in the hands of the pupils as to the management and working of them, they receiving only such guidance and control from the teacher as will tend to make them yield their fullest fruitfulness. Outside of school-hours, but directly in connection with the school-life, such undertakings as at-homes (teachers to senior or junior pupils, and *vice versa*, and seniors to juniors, or class to class, &c.), concerts, dramatic entertainments, and dances should be encouraged. Organized games (cricket, football, tennis, hockey, &c.), and societies (debating, literary, scientific, &c.) are also most valuable. And, as often as possible, the most accomplished artists, lecturers, &c., that can be obtained should be invited to entertain and instruct the pupils. For these things make the school-life one of the best parts of early life, and not a misfortune of it; and so we shall get in our schools less of formal learning but more of real life, which is the truest and deepest learning.

QUESTIONS.

1. H. Holman defines "education in its practical form" as "systematic efforts to develop and guide self-realization." Explain and discuss.
2. What are necessary conditions of intellectual pleasure? Why important?
3. Give a general outline of intellectual processes involved in learning. (Illustrate by examples.)
4. Why is interest a better motive than a sense of compulsion in the performance of a task? (Illustrate.)
5. What is the strongest enemy of pleasurable activity? Give reasons for your answer and tell how this condition can be best avoided.
6. Discuss what rules should govern the length of lessons and the succession of subjects of study in the daily program of a school.

Method of Education.

Finding Out and Being Told.

By L. C. MIALL, in *London Journal of Education.*

[Abridged for EDUCATIONAL FOUNDATIONS.]

TEACHERS who understand their business often quote some such rule as this:—"Never tell the child what he can find out for himself." There is no rule more difficult to keep. The bad teacher breaks it always; his lessons are framed on a contrary rule. The good teacher breaks it now and then, from lack of time, or from thoughtlessness, or even of set purpose. After all the rule is but a rule, and the teacher is a free man. He will not bind himself by rules. Nevertheless, the better the teacher the more scrupulously will he keep this one. Experience and patient study of methods will make it possible for him to observe the rule where a less attentive teacher would infallibly break it.

Taken as a literal rule, hard and unflinching, it is impossible and unnatural. All rules are so, where the minds of a number of human beings are concerned. The best of teachers will tell a class some fact in natural history, when he might have taken them into the fields to observe it for themselves. The fact is wanted there and then; to observe it directly would cost half a day; to omit all mention of it would be to omit a necessary qualification of an important principle which is being worked out. If we are to make our natural science absolutely for ourselves, we must be prepared to spend some centuries upon it.

We are, I believe, to mind the rule, but not mechanically or formally; it is like a rule of health. The child's body, for example, is to be kept warm and well fed, but *we are* not on that account to refrain from sponging it with cold water, nor are we to give it food whenever it begins to grow hungry.

We shall draw from our rule such practical maxims as these: Not to encumber with help; not to keep the child's mind passive, while the teacher's mind is working busily; not to use mechanical ways of teaching.

When the children have been cutting out paper, or putting sticks together, the teacher will not say: "That side is to long or too short." He will point out that there is something wrong, and encourage the child to discover what it is. When a model is to be drawn, he will not begin by prescribing the size of the drawing, but will inquire, together with the child, whether the first attempt is convenient in point of size.

Learning by doing follows the same rule. The child begins confidently, not seeing any difficulty; then makes a mistake, or is stopped by want of skill. The teacher helps the child to discover the mistake, and to get over the difficulty, but does not warn against possible blunders, unless there is risk of serious disaster.

In the object-lesson the children will be asked to point out the facts of structure, and, if untrained, they will very likely omit all the most important. The teacher will not instantly remedy the defect, but will bring it home by-and-by.

Perhaps the skin and the stalk and pips of the apple have been left out. Questions about the living apple will discover these omissions and make it clear how impossible it is for the apple to exist without things which have been forgotten.

We shall not be formal or proceed always by one road, lest we deaden the child's interest, on which all the rest depends. A long enumeration of facts, a long exercise in inference or interpretation, a long practical exercise, all these are wearisome to a young child. A good lesson will have something of each, but not very much. A knowing teacher will venture now and then to digress and give an unexpected turn to the lesson in order to revive the interest. We begin with the shape of a leaf of duckweed, and by-and-by, to our surprise, we are experimenting on the surface-tension of water. But the good teacher will come back to his duckweed in the end, and will never have really left it.

The hand of the teacher will guide the lesson thruout, little as the class may be aware of it. It is he who gently presses a vital question, and discourages a trivial one. But, if the children are both able and willing to take even a step or two for themselves, the teacher will gladly give them the chance. There are educational theorists who would leave the guidance, too, in the hands of the children. For my own part, I do not accept their system, but wait until I come to know the wise and capable men and women who have been produced by it. I cannot understand a gospel of Nature which leaves children to bring themselves up.

"Finding out" must not be interpreted so loosely as to include looking up words in a dictionary, or other tasks of the same kind. It is only when the finding out gives exercise to the higher faculties that it becomes precious. If I were teaching a language I would tell the class the words which they did not know, and try to tell them something about each word which would make it stick in their memories. I have looked up thousands of words in six or seven languages, and am so far from feeling any satisfaction in my labors that I would spare myself and others as much of this dull mechanical business as could possibly be contrived. Looking up words in a dictionary is no more profitable than consulting an index of any other sort; when we have it to do, let us go thru it cheerfully, but the less of it the better. We need never be anxious to find drudging work for our pupils; they will get enough of that in any serious occupation, and the teacher should take all pains to keep it down.

The good teacher will observe his own progress as well as the progress of the children. The further he goes in the right path the more possible will he find it to mind the rule, "Never to tell the child what he can find out for himself." And the rule, not kept slavishly or literally, will at length become the main guide of his teaching. He will think of it more constantly, and respect it more sincerely, than any other.

QUESTIONS.

1. (a) What rules for teaching are contained in the Comenian maxim, "Learn to do by doing"? (b) What are the rational limitations of this maxim? (Illustrate by examples.)

2. Outline a model object lesson for children in the first or second school year.

3. What is meant by educating thru "finding out" processes, in distinction from "being told" processes? Illustrate.

4. Give a summary of cautions a teacher should observe in order to avoid the mistake of telling a child what he might more profitably find out for himself. [The insertion of the phrase "more profitably" may suggest the limitations of the rule, "Never tell the child what he can find for himself."]

QUESTIONS ON DR. ELLIOT'S ARTICLE.

(Continued from page 595.)

9. What new demands does the phrase "the school should be the most active social center of a neighborhood" impose upon the common school authorities? (Suggest concrete plans for carrying them into effect.)

10. Discuss the justice of President Eliot's argument to the effect that "the adding of pleasures, joys, and satisfaction to human life ought always to be recognized as the principal function of every school and of all education."—What bearing has this upon the extension of the social endeavors of the schools?

History of Art.

Assyrian and Persian Art.

[Adapted from K. GOEPEL's "History of Art."]

By FRANCIS C. TURNER.

MESOPOTAMIA, the country watered by the Tigris and the Euphrates, formed the rich and powerful kingdoms of Assyria and Babylon. The history of this country divides itself into three periods, the central one being the occupation of the country by the Egyptians. Inscriptions in Egypt tell us that Mesopotamia was conquered by Thotmes III., and regained its independence during the reign of Rameses II., both kings of the eighteenth dynasty; of this long domination no trace is to be found in the architectural remains in the country. To the earlier period belong the migrations of Nimrod and Assur, the building of Nineveh, and the erection of the tower of Babel. Of these buildings no remains are known; the huge pyramid which has frequently been supposed to be the Biblical tower of Babel, is now known to be a building of the time of Nebuchadnezzar.

The architecture of this earlier period was probably simple, with little or no sculptured ornament; for the religion of the Aryan people, who formed the dominant race, did not allow them to make sculptured representations of their divinities. The character of their dwellings was influenced by the conditions under which they lived. The alluvial plains of the Euphrates and Tigris produced but little wood suitable for building material, while stone was equally rare. The climate during the ten months of drought was one of fierce and incessant heat. Hence in the Median lands where forests abounded, a simple and natural architecture existed which can be seen to the present day; wooden columns forked at the top support beams crossed by rafters, and on this simple roof earth is piled to a considerable thickness, to keep out the blazing heat of the summer sun and the fierce rains of the wet season.

WINGED FIGURE FROM THE RUINS OF NINEVEH.

At the time of the revolt from the Egyptian yoke the architectural history of Assyria began. The earliest excavated building is the western palace of Nimrod. This, like all the Assyrian palaces, was built on an artificial mound or platform of sun-dried bricks, which could be ascended by steps or by gentle inclines for chariots on either side. The whole building seems to have formed a square about 340 feet each way. Two entrances adorned with winged bulls led into the great hall or throne room, behind which thru a smaller hall we pass into the central court of the palace. On either side of this the rooms were arranged three deep, and behind is a double series of banqueting halls. The walls of all these apartments were lined with sculptured slabs representing chiefly the dignity of the king, his achievements at war, and his skill in the chase; besides these, many were devoted to religious subjects.

Much more perfect are the remains of the palace at Khorsabad, about fifteen miles north of Nineveh. The mound of the palace stands half within, half without the walls of the city, so that while it is not in the town its gates are protected by the city walls. On the side away from the town at Nimrod and at Sennacherib's palace of Koyunjik, the river Tigris protected the palace; while here probably an artificial lake served the same purpose. The great winged bulls now in the British museum formed the outer portal on the city side. Passing these, a flight of steps led to the outer court, from which magnificent portals on the south side led into the inner court of the palace. On the northeast corner was the principal court, open on two sides to the country, out of which the three principal rooms of the palace opened. The walls of all these parts of the palace are paneled within

ASSYRIAN THRONE ROOM.

and without with alabaster slabs, sculptured with the history of the wars, amusements, and devotional exercises of King Sargon, its founder. These slabs are generally about nine feet high, tho the huge bulls which guard the portals are considerably higher. Above the sculptured slabs the regular courses of brickwork can be traced to a height of three or four feet more; but the height of the bulls indicates that the walls cannot have been less than eighteen feet.

Above this the rest of the building can only be guessed at. The superstructure was entirely of wood; and from the conditions of climate, the remains at Persepolis, and the modern buildings found in the country, it is possible to make a fair attempt at restoring it.

The great temple of Sennacherib was far more magnificent than that of his father; the panelings have been excavated of a large number of apartments, but the extent of the mound leads us to believe that this formed by no means the whole of the palace.

These monuments of Oriental splendor and luxury were as ephemeral as the dynasties of their builders; their wooden roofs were burned and the palaces were buried beneath the masses of earth which covered the roofs. The thick walls of clay crumbled away; and were it not for the preservation of the beautifully sculptured slabs, there would be nothing in these formless masses of clay and bricks to indicate the palaces which have thus perished.

Attempts to discover traces of the magnificence of the great city of Nebuchadnezzar and Semiramis have thus far been very unsatisfactory to art students. The huge mounds called Mujelibè Kasr and Amran, which can now be seen on the site of the city, probably supported the palaces which excited the wonder and admiration of Herodotus. That extraordinary architectural work, the hanging garden, which the Greek historian describes, is more intelligible to us since we have noticed the prevailing custom of covering the roofs of houses and palaces with a layer of five or six feet of earth.

The want of accessible material prevented the Assyrians from achieving any independent success in free sculpture: the few known statues are conventional figures of the Egyptian type. But in wall decoration, either colored glazed tiles, or the low reliefs carved upon alabaster slabs which have been already referred to, they attained magnificent results.

The rich treasures unearthed by Sir H. Layard, and now in the British museum, include numerous slabs, some representing solemn processions of kings and priests and winged figures with heads of birds and beasts; others giving battle scenes, sieges, victorious returns of kings with their captives; and others of sporting scenes, especially lion hunts, the favorite amusement of the Assyrian monarchs. It is in these last that Assyrian sculpture is seen at its best; nothing at any period can surpass the truthfulness and vigor with which the various animals, antelope, elephant, rhinoceros, and lion, are represented; the wounded animals, lions especially, are drawn with marvelous truth and sympathy. The manner in which the animal forms are conventionalized, with the result of emphasizing their typical character, is admirable.

In the human figure the same careful study of nature is to be observed as in the animals; but here it results in an over-emphasis of muscles and joints, which gives an appearance of heaviness, and forms a strong contrast to the figures in the Egyptian reliefs, in which the light, flexible form of the Egyptian fellah is shown in simple lines with all muscular prominence suppressed. The Assyrian figure was studied from nature more directly than the Egyptian; but instead of being refined was exaggerated and coarsened. Nevertheless, the decorative purpose is always strictly kept in view even in the most truthful lines of the body.

The empire of Babylon fell into the hands of the Persian. Cyrus, the founder of the Achæmenid dynasty, "the righteous man from the East," who seemed to the Hebrews in their captivity a deliverer sent by God, utterly destroyed the Babylonian tyranny and founded his empire on its ruins. These Persian monarchs henceforth lived a good deal at Babylon, and no doubt added to the buildings and beauty of the city of Nebuchadnezzar. But their favorite home was in their own land, at Persepolis, where Darius built his palace, and his son Xerxes added to it. We must now turn our course thither, passing eastwards, across the broad table-land which forms the chief part of Persia, to the mountains of the southern border. While the northern mountains are raw and snowclad, these are hot and dry, but amid their valleys we find pleasant streams and lakes, around which the hills are clothed with oranges, myrtles, and vines. In these beautiful valleys grow fine rose trees, amid which the nightingale pours forth her sweet complaint, and the spring seems never to end.

Persian Art.

In one of these oases in the desert land of Persia stood the city of Persepolis, and here we can still see the remains of the temple or palace of Xerxes. Altho the style of architecture here must have been very similar to that of Nineveh, the appearance of the ruins is very different; for owing to the nature of the country, which afforded a plentiful supply of building stone, the superstructure was of that material instead of wood, and comparatively thin walls took the place of the massive brick structures of Nineveh. Here, then, the columns remain standing, while the walls have succumbed to the influences of the atmosphere. Two vast flights of steps lead up to the great hall; the lower one is without sculptured ornament; the upper is ornamented with three tiers of sculpture, representing the people bringing presents and the subject-nations tribute, to lay at the feet of the great king. All the stairs are arranged in double flights. The central halls are studded with pillars, the number varying according to size—four, sixteen, thirty-six, or one hundred. Two orders of pillars are employed to support the roof of this splendid building; one with double bull capitals, the other with an acanthus capital surmounted by Ionic volutes.

Very interesting are the sculptures in the joints of the doorways of the large hundred-columned hall. The king is seated on his throne, and around him are various mythological personages. Upon these sculptures are cuneiform inscriptions, which tell us of the history of the building and its religious purpose:—

"I am Xerxes, whom the great God Ormuzd made king; the god who created the earth, and created pleasuse for men, and made Xerxes king and sole ruler over many peoples; and king of lands inhabited by many races; king of this earth, and moreover son of King Darious, the Achæmenid: thru the favor of Ormuzd I have made this doorway."

We know how this Xerxes extended his power over the sea into European lands, as his father had subdued the Hellenic colonies of Asia Minor. In the struggle with Greece, the freemen of the Hellenic states drove back the hordes of slaves with which Xerxes flooded their fatherland.

Later, Alexander of Macedon, in the intoxication of victory, threw his torch into this wonderful palace, after he had defeated the Persians, forgetting the Greek faith that the gods avenge excess of pride, and unconscious of his own fate. The city of the dead cut into the rock alone remains untouched.

History of Education.

School Thrashings.

By Foster Watson.

TWICE I received a thrashing at school. In the first instance I was, I suppose, ten or eleven years of age. I had not been at the school many weeks; I had formed a close friendship with a boy about my own age. On leaving school one afternoon, he and I were induced by some of the older and bolder sort of boys to "have a fight"—why, I don't know to this moment.. We were caught and received a strong man's blows with the ferula across our hands. Some of those who had urged us on to the encounter were also punished; some were not—why, I don't know; there is ususally something mysterious about thrashings. It happened that, for the afternoon of the day on which I received the stripes, I was asked "out to tea." So young and little was I, that I was looked upon as so irresponsible a being that it was desirable to have my hands washed, instead of washing them myself. I do not, I shall not, forget the excruciating pain of the soap and the rubbing. Never have I borne such physical pain with the fortitude I showed, or rather concealed, that afternoon.

The second occasion, some years later, was due to having a "detention lesson" on geography. Some ten or a dozen of us were among those brought back one Wednesday afternoon, with the understanding that we might go after "saying our lesson." The geography master was not the detention master that day. Among others I went up and said my lesson. Something had not pleased the master—but with this I had nothing to do. However, when I finished he told me to go to my seat and "write it out twenty times." I was wild with excitement; but when I reached my seat I sat down with a quietness and satisfaction that ought to have given the master pause. I chose to obey his order literally, and wrote out the word "*it*" twenty times, and with that self-consciousness of right which leads a boy so spontaneously to dash his head against the wall, I took the twenty "*its*," with a smile, to the master. I was not the first to be unruly, and as certainly not the last. The master was weak. By-and-by there was pandemonium. The next day ten or fifteen of us were flogged by the headmaster, who, after the infliction of the punishment, turned as white as a lily, and suddenly, apparently realizing that he had thrashed in the number some of his best boys, vanished into the playground. We were all becalmed and subdued, except one boy who had not been flogged. He turned plaintively to me: "I say, old fellow, I would so much prefer to be licked. Don't you think I had better go and ask him to thrash me?" I remember feeling two things—over and above the smart of the pain I was suffering. First, a sense of the ludicrous, from the thought that the headmaster had so clearly had enough physical exercise, and that it would be incongruous to have a voluntary victim coming out and disturbing his reflections. More vividly still, there rose within me a sympathetic sense of the mental conflict in my friend's mind, and a keen perception of the responsibility of his situation, for he had been one of the most rowdy. In the end, he chose the harder course of not going, and, I believe, greatly blamed himself for it afterwards.

Law and order, of course, must be secured, and flogging has immemorial tradition in its favor. In the early days of the university, when the elementary master—the *grammaticus*, as he was called—received permission to teach from the university, he was presented with a badge, not a book, as might be expected, but with a rod and a birch. One of the most frequent of the devices on the seals of early grammar schools is the picture of one of these *grammatici* with his badge of office—the birch; and on some of the more realistic of these seals may be seen the master in the very act of birching a boy spread carefully over his knee. Mr. Maxwell Lyte, in his interesting history of Oxford university, when speaking of the "degree in grammar" which the ordinary schoolmaster had to take as a preliminary of registration, says:

> "The first act of the new master of grammar was to beat openly, in the schools, a 'shrewd boy,' who received a groat by way of reward for his sufferings."

Richard Mulcaster says:—

> "In any multitude the rod must needs rule; and in the least paucity, it must be seen, howsoever it sound. . . . [Yet] ever the master must have a fatherly affection, even to the unhappiest boy, and think the school to be a place of amendment, and, therefore, subject to misses."

If report speaks true, Mulcaster indeed did not spare the rod. The following, slightly altered, comes from a law student's commonplace book, probably belonging to one Thomas Wateridge, of the (Middle) Temple, in the time of James I.:

> "*Of Monckaster, the famous Paedagogue.*—Monckaster was held to be a good schoolmaster, and yet he was somewhat too severe, and give to insult too much over children that he taught. He beeinge one day about whippinge a boy . . . . out of his insultin humour, he stood pausinge a little . . . ; and then a merry conceyt taking him, he sayd: 'I aske ye banes of matrymony between this boy . . . of such a parish, on ye one side, and Lady Burch, of yis parish, on the other side; and if any man can shewe any lawfull cause why yey should not be joyned together, let ym speake, for yis is ye last time of askinge.' A good sturdy boy, and of a quick conceyt, stood up, and sayd: 'Master, I forbid ye banes.' The master, taking this in dungeon, sayd: 'Yes, sirrah, and why so?' The boy answered; 'Bycause all partyes are not agreed;' whereat Munkaster, likinge that witty awnswer spared the one's fault and th'other's prsumption."

Everyone remembers Roger Ascham's words to Sir Wm. Cecil in the charming preface to "The Scholemaster:"—

> "Not long after our sitting down, I have strange news brought me, saith Mr. Secretary, this morning, that divers Scholars of Eton be run away from the School, for fear of beating. . . . Mr. Peter [Sir Wm. Peter], as one somewhat severe of nature, said plainly, that the Rod only was the sword, which must keep the school in obedience, and the scholar in good order. Mr. Wotton, a man mild of nature, with soft voice and few words, inclined to Mr. Secretary's judgment, and said, in mine opinion, the school-house should be indeed, as it is called by name, the house of play and pleasure, and not of fear and bondage; and as I do remember so saith Socrates in one place of Plato.[*] And, therefore, if a Rod carry the fear or a sword, it is no marvel if those that be fearful of nature choose rather to forsake the play, than to stand always within the fear of a sword in a fond man's handling. . . . M. Haddon was fully of M. Peter's opinion, and said, that the best schoolmaster of our time was the greatest beater, and named the Person."

Roger Ascham makes it impossible to doubt to whom he is referring, tho he skilfully avoids mentioning the name. This can be none other than the redoubtable Nicholas Udall. He has many good points in his favor. Among others, he translated the "Apophthegms of Erasmus," and edited some "Flowers from Terence." Tusser, the author of "The Five Hundred Points of Good Husbandry," states his experience of Udall as a headmaster, in the often-quoted lines—

"From Paul's I went, to Eton sent
To learn straightways the Latin phrase,
When fifty-three stripes given to me
At once I had.

"For fault but small, or none at all,
It came to pass that beat I was,
See, Udall, see the mercy of thee
To me, poor lad!"

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[*] "The Republic," Book VII., Jowett's translation, p. 240.

Samuel Johnson said that Dr. Busby used to declare that his rod was his sieve, and that whosoever could not pass thru that was not the boy for him. Everything goes to show that the "ancient dread of Busby's awful reign" has been exaggerated, but Mr. W. Carew Hazlitt, in his "Schools, School-Books, and Schoolmasters," tells a story too good to pass by. A Frenchman, by some chance, threw a stone thru a window of the room in which Dr. Busby was teaching. The doctor, imagining that it was some mischievous boy, sent for the offender. When the Frenchman was brought in, Busby at once, as was his custom, called out, "Take him up." A flogging accordingly was given him before the school. "The Frenchman went away in a fury, and at once sent a challenge to Busby by a messenger. The doctor reads the message and cries, 'Take him up' and the envoy shares the fate of his employer. He, too, enraged at the treatment, returns and demands compensation from Monsieur; but the latter shrugs his shoulders and can only say, 'Ah,me! he be the vipping man; he vip me, he vip you, he vip all the world.'"

Of course, Dr. Keate, of Eton, must not be unmentioned. One of the best stories told of him is his action with regard to the batch of candidates for confirmation. These boys' names were sent by accident to Dr. Keate on the same-sized and same-shaped paper as that used for reporting delinquents. Keate insisted, it is said, on flogging all the boys mentioned on the paper, "being the more angry with them for attempting to escape punishment by setting up a plea which seemed to him both false and irreverent."

The other well-known but probably quite apocryphal story must be given. The doctor was commenting on the Beatitudes. "'Blessed are the pure in heart.' Mind that; it's your duty to be pure in heart. If you are not pure in heart I'll flog you." Of Keate, further, it is said—I quote it not as a fact, but as an indication of his flogging reputation—that he gave the order that a boy should lose his remove if flogged *more than three times in one day.*

This is an age of statistics, and I bring forward, therefore the following, quoted from Dr. Dibdin's "Bibliomania," 1811:

> "A German magazine recently announced the death of a schoolmaster in Suabia, who, for fifty-one years had superintended a large institution with old-fashioned severity. From an average, inferred by means of recorded observations, one of the ushers had calculated that, in the course of his exertions, he had given 911,500 canings, 121,000 floggings, 209,000 custodes, 136,000 tips with the ruler, 10,200 boxes on the ear, and 22,700 tasks by heart. It was further calculated that he had made 700 boys stand on peas, 6,000 kneel on a sharp edge of wood, 5,000 wear the fool's cap, and 1,700 hold the rod.

This passage has quite taken away the sense of almost isolated disgrace which I used to feel about my own two thrashings!

Topics for Reflection and Discussion.

Reading, writing, and number have their place in the school program; but it is one thing to teach them because they are in the course of study and another because the educational welfare of the child demands them.

The child is in the world to live. The better he is educated the better he ought to know how to live. But he will never learn to grow in this art if he is held down to the venality of school programs which reduce the chief end of man to making a living.

All education is by self-activity. When self-activity stops, education stops.

Editorial Notes.

The Program for 1903-4.

The present number closes the fourteenth annual volume of EDUCATIONAL FOUNDATIONS. While conscious of many shortcomings, the editor cannot but feel assured, on looking over the work of the year, that the readers have received much valuable suggestion and help in the direction of professional advancement. Many kind friends have written encouraging words and pointed out articles and courses that have particularly benefited them. The series of articles by Dr. Charles B. Gilbert on the general subject of school administration seems to have been particularly well received, and justly so, for it represents the mature experience of a vigorous leader in education, who has been remarkably successful in the field of school superintendency. Thus Supt. George W. Twitmyer, of Wilmington, Del., writes: " Dr. Gilbert's school administration series is unusually strong; the best treatment I know of; it is worth many times the price of a year's subscription." It is with particular pleasure, therefore, that the editor announces Dr. Gilbert's consent to continue his series thruout the volume beginning with September. The complete list of the topics to be discussed by him will be ready in a few weeks, and may then be obtained on application to the publishers. The work of the year in this department will, however, be complete in itself, as new subscribers will find.

Child Study.

The articles in the department of Child Study have also been especially commended by many of the friends who responded to the editor's request for suggestions as to the improvement of this magazine. The difficulty of providing suitable and valuable material for this department grows with every year. The articles that appeared in the department during the last year were collected at a considerable outlay of time and strength. In spite of the fact, or, ought I to say, because of the enormous amount of literature on the subject that is extant, really valuable material is difficult to obtain. The course for next year will be of a decidedly practical character. The intention is to style the department "Child Study and Child Training," beginning the year's work with a thought-provoking paper by the famous Italian psychologist, Guglielmo Ferrero, on " How Children are Made to Suffer by the Mistakes of Educators." This will be followed in October and November with articles on "Growth and Arrested Development," by Dr. F. M. Powell, of Iowa, and "Cautions to be Observed in Educational Child Study," by the editor.

The numbers for April, May, and June will take up especially the study of children's temperaments and give suggestive questions for the guidance of teachers.

The Historical Courses.

In the department of History of Education there has been some excellent study material, tho circumstances considerably changed the plans laid out at the beginning of the volume. The same may be said of the department of Art History. The latter started, in March, a fine course in this subject, and has thus far given outlines of ancient art in East India, Egypt, Babylonia, and Assyria. The new volume will continue the course with a comprehensive outline of classic art in Greece and Rome. There will be an abundance of illustrations, many of them copies of rare works that will be highly valued by everyone interested in classic antiquity.

History of Education.

The importance of the history of education is gradually becoming recognized among the teachers of this country. The course of the last few months has been, to some extent, preparatory for the course of next year, which will be largely a biographical one, and will include sketches of Comenius, Locke, Basedow, Pestalozzi, and Froebel. At the close of the year there will be an outline discussing the relation of the educational reformers to one another and the place each occupies in the development of modern education.

Educational Classics.

Closely related to the departmant of History of Education is that of Educational Classics, which appears to have answered a real need. Several superintendents who are using EDUCATIONAL FOUNDATIONS as a basis for the discussions at their teachers' meetings write that they are very much pleased at the interest stimulated by the golden texts selected from the writings of the great masters. In answer to the requests of friends who are especially well qualified to judge of the needs and wishes of students of education, a large portion of the department in the new volume will be devoted to Froebel's wonderful "Education of Humanity." Herford's splendid "Students' Froebel" will form the basis, and the material will be closely adapted to the peculiar wants of EDUCATIONAL FOUNDATIONS.

In place of the department of psychology tentatively suggested last month, there will be a new department to be known as Methodology of Instruction. This will prove, it is hoped, a most welcome departure. Whenever possible, there will be two articles on the same subject, or on two closely related topics. In either September or October there will be an article by Dr. L. Seeley, professor of pedagogy in the New Jersey State normal school, on "True Tests of a Good Method in Teaching." This will be followed by discussions of "The Use of Maps in Teaching Geography," by Prof. H. G. Seerley, the noted English geographer, and "Geography Thru Map Drawing," by T. W. Phillips. The next topic to be handled by skilled educators will be "The Educational Uses of Stories."

The department of the Principles of Education promises to be especially strong. Here the larger question of present day social demands upon the schools, and the psychologic considerations in education will furnish the central topics. The first article will treat of some of the new educational problems which have grown out of the development of labor unions and the struggle between capital and labor as revealed in strikes and lockouts. Supt. Thomas M. Balliet, of Springfield, Mass., will write on "The Educational Significance of Plays and Games;" Supt. W. E. Chancellor, of Bloomfield, N. J., on "The Schools as a Social Institution;" President David Starr Jordan, of Leland Stanford university, on "Nature Study and Moral Culture;" and Prof. J. F. Reigart, of New York university, will describe "The Art Aspects of Teaching."

In order to find room for the many good things which have been planned for the new volume, and at the same time to have the outward appearance of the magazine in a measure indicate the dignity of its objects and ideals, the publishers have agreed to enlarge the size of the pages to nearly magazine size, and to increase the number of pages.

The regular subscription price will hereafter be $1.50. But for the present, renewals and new subscriptions will be accepted at $1.00. Price to reading clubs for adoption will be $1.00, *net*. Address the publishers, E. L. Kellogg & Company, 61 East 9th street, New York, for fuller announcements as soon as they are completed. The September issue in the new form will be ready early in June.

Teachers' Examinations.

New York State Uniform Examinations for Commissioners' Certificates.

ALGEBRA.

1. What factors will give the least common multiple of a^3+b^3, a^2+b^2, $a^2+2ab+b^2$?

2. Find the simplest expression for $\dfrac{n-1+\dfrac{6}{n-6}}{n-2+\dfrac{3}{n-6}}$

3. Find the value of x in the equation $\frac{x}{a-b}-\frac{5a}{a+b}=\frac{2bx}{a^2-b^2}$

4. Find the value of x and y in the equations

$$\frac{3x-5y}{2}+3=\frac{2x+y}{5}$$

$$8-\frac{x-2y}{4}=\frac{x}{2}+\frac{y}{3}$$

5. Find the value of $(x-2)^5$ by use of binomial theorem.

6. Express without the use of fractional or negative exponents

a) $a^{\frac{3}{4}}$; b) $x^{-\frac{2}{3}}$

7. Find the sum of $\sqrt{\frac{5}{2}}$, $\sqrt{\frac{160}{49}}$, $\sqrt{\frac{2}{5}}$,

8. Find the value of y in the equation

$$\sqrt{y-\sqrt{y-3}}=\frac{2}{\sqrt{y}}$$

9. A man engaged to work a days at m dollars a day. He lost c days for each of which he forfeited n dollars in addition to his regular daily wages. With the money earned he purchased coal at s dollars a ton. How many tons of coal did he purchase?

10. A man walking one-half mile above his ordinary rate gains 2 hours in 42 miles. At what rate does he ordinarily walk?

ANSWERS.

1. $(a+b)^2\ (a^2+b^2)\ (a^2-ab+b^2)$
2. $\dfrac{n-4}{n-5}$

3. $x=5a$

4. $\begin{cases} x=12 \\ y=6 \end{cases}$

5 $x^5-10x^4+40x^3-80x^2+80x-32$

6. $\sqrt[4]{a^3}$ $\frac{1}{\sqrt[3]{x^2}}$

7. $\frac{4}{7}\sqrt{\frac{129}{10}}$

8. $y=4$

9. $\frac{m(a-c)-nc}{s}$ tons of coal

10. 3 miles.

AMERICAN HISTORY.

1. What discovery resulted *a.* from Ponce de Leon's search for the fabled fountain of immortal youth; *b.* from De Soto's expedition?

2. Give a brief account of Roger Williams in his relation to colonial history.

3. *a.* Define the boundaries of "The Northwest Territory" as organized in 1787. *b.* Name a famous provision in regard to this territory contained in the "Ordinance of 1787."

4. State the cause and the results of the war with Tripoli, and tell in whose administration it occurred.

5. Mention three Americans that were prominent in inciting the colonists to rebel against the mother country.

6. Name and locate six fortified places taken from the French by the English during the French and Indian war.

7. Mention two inventions and a great public work of the first forty years of our national life that greatly stimulated and improved domestic trade and commerce.

8. *a.* Why did the North seek to maintain a blockade of the Southern ports during the Civil War? *b.* What were blockade runners?

9. Give the location of Fort Donelson, name the general by whom it was taken, and state an important result of its capture.

10. Name a prominent living American *a.* inventor; *b.* author; *c.* statesman; *d.* philanthropist.

ANSWERS.

1. *a.* Florida. *b.* Mississippi river.

2. Arrived at Boston 1631. Preached in Salem. In 1635 exiled from Massachusetts. In 1636 founded Providence. In

1643 went to England and got a liberal charter. Governor in 1649. In 1663 got a new charter in England. President of Rhode Island 1654-1657. Captain of militia in King Philip's war. Died in 1683.

3. *a.* The territory north of the Ohio, west of New York, south of the Great Lakes, and east of the Mississippi. *b.* That no slavery should be allowed there.

4. Raids of the pirates and holding of sailors in slavery; abolition of piracy; Jefferson's.

5. Patrick Henry, John Hancock, and Samuel Adams.

6. *a.* Fort Gaspereau, bay of Fundy. *b.* Louisburg, Cape Breton Island. *c.* Fort Niagara, Niagara river. *d.* Fort Frontenac, near Kingston, N. Y. *e.* Fort Duquesne, on site of present Pittsburg. *f.* Ticonderoga, on Lake Champlain.

7. Cotton gin, steamboat, and Erie canal.

8. *a.* To prevent the export of cotton and the import of munitions of war. *b.* Ships that tried to break thru the line of blockaders.

9. Fort Donelson, in northern part of Tennessee, on the Cumberland river; General Grant; compelled abandonment of Kentucky by Confederates of their whole defensive line.

10. *a.* Thomas Edison. *b.* William D. Howells. *c.* John Hay. *d.* Andrew Carnegie.

CURRENT TOPICS.

1. Name three of the principal recommendations of the report of the Coal Strike Arbitration Commission.

2. *a.* Upon what two treaties was the United States senate called in special session to take action? *b.* What action was taken on each?

3. *a.* What new department of national government was recently created? *b.* What is to be the scope of its work? *c.* Who has been placed at its head?

4. Give a brief account of the recent trip of Colonial Secretary Chamberlain, stating its purpose and result.

5. Discuss one of the following questions: *a.* An important event celebrated by the Methodist church February last; or, *b.* The Henry Ward Beecher memorial.

6. *a.* What bill for the relief of the Irish tenantry is now before the British parliament? *b.* State its main provisions.

7. Discuss one of the following questions: *a.* A recent official act of President Roosevelt which has brought the negro question to the front, or, *b.* The events relating to the recent election of United States senators in the state of Delaware.

8. State an event of current interest in regard to the life of each of the following: Julian Ralph, Herbert W. Bowen, Baron Speck von Sternburg, William R. Day, Abram S. Hewitt, Colonel Arthur Lynch. (Answer any four.)

ANSWERS.

1. Stricter enforcement of the child labor laws; that the government provide machinery for the making of a compulsory investigation of labor difficulties; the discontinuance of the system of employing "coal and iron police."

2. *a.* Panama canal and Cuban reciprocity. *b.* Both were passed, but conditions were attached to the latter, making the consent of the House of Representatives necessary for it to become a law.

3. *a.* Department of Commerce. *b.* The scope of its work is to develop and regulate trade and industry. *c.* Secretary Cortelyou.

4. He went to hold conferences with all those interested in the government of the colonies; made a semi-royal progress, and did much toward the re-establishment of good feeling between the nations.

5. A personal answer required.

6. *a.* The land purchase bill. *b.* The land is to be sold to the tenants for seventeen years' rental value. The government is to advance the money and exact about three per cent. interest and establish a graded system of repayment covering a long term of years.

8. Julian Ralph, Turco-Græcian war. Herbert W. Bowen, Venezuela difficulty. Baron Speck von Sternburg, German ambassador during Venezuela troubles. William R. Day, ex-secretary of state, now judge of supreme court. Abram S. Hewitt, connected with Civil war. Col. Arthur Lynch, convicted of treason in England.

ENGLISH COMPOSITION.

1. Punctuate the following:

Donatello playfully cried Miriam do not leave us in this perplexity Shake aside those brown curls my friend and let us see whether this marvelous resemblance extends to the very tips of the ears If so we shall like you all the better.

2. Combine the following into a single well-expressed sentence:

The ruins of the abbey are scattered. They are on every side. Ivy and elder bushes half cover the ruins. These bushes are the harbors of several solitary birds. These birds are seen only at night.

3. From the following groups make single sentences of such of the statements as can be combined without violating the law of unity:

a. "Uncle Tom's Cabin" was written by Harriet Beecher Stowe. She was the sister of the famous preacher. Her brother was fond of precious stones.

b. His death was due to nervous prostration. He was fond of playing tennis. He had reached the age of forty-seven years.

c. Master Simon had to hurry off. He had an appointment at the village church. He was to meet the choir there.

4. Resolve the following into four short sentences:

My attention was so much taken up by Mr. Burchell's account, that I scarcely looked forward as we went along. We were alarmed by the cries of my family, turning, I perceived my youngest daughter in the midst of a rapid stream, thrown from her horse, and struggling with the torrent.

5-6. Use the following as a basis for a descriptive sketch, supplying such details as the lines suggest:

> "How often have I paused on every charm,
> The sheltered cot, the cultivated farm,
> The never-failing brook, the busy mill,
> The decent church that top't the neighboring hill."

7. Write a note introducing a former fellow-teacher to a teacher with whom she is to be associated in a new position.

8-10. Write a composition on one of the following topics:

The future of the Southern Negro, My favorite diversion, Spelling reform, Wayside flowers.

ANSWERS.

1. Donatello playfully cried: "Miriam, do not leave us in this perplexity. Shake aside those brown curls, my friend, and let us see whether this marvelous resemblance extends to the very tips of the ears. If so, we shall like you all the better."

2. The ruins of the abbey, half covered by ivy and elder bushes, which serve as the harbors of several solitary birds seen only at night, are scattered on every side.

3. *a.* "Uncle Tom's Cabin" was written by Harriet Beecher Stowe, sister of the famous preacher. Her brother was fond of precious stones and also of playing tennis.

b. His death, which occurred when he had reached the age of forty-seven years, was due to nervous prostration.

c. Master Simon had to hurry off for an appointment at the village church, where he was to meet the choir.

4. My attention was so much taken up by Mr. Burchell's account that I scarcely looked forward as we went along. We were suddenly alarmed by the cries of my family. Turning, I perceived my youngest daughter in the midst of a rapid stream. She had been thrown from her horse and was struggling with the torrent.

5-6. Personal answer required.

7. DEAR MISS C.:

This is to introduce to you Miss A., formerly a fellow-teacher with me at Smithtown. I think you will enjoy your work with her, and anything you can do to make her new position pleasant I shall greatly appreciate.

Yours sincerely.

8-10. Personal answer required.

GRAMMAR.

1 I have sometimes thought that those who are so fond of
2 exaggerating method are very much in the position the
3 Good Samaritan would have been in, if, upon finding the
4 poor traveler upon the roadside on the way from Jerusa-
5 lem to Jericho, he had taken a good look at him and had
6 then gone off and written a monograph on the relief of
7 the suffering. What the traveler wanted was relief, not
8 to be made an item of scientific study. Exactly the same
9 thing is true of the growing child. He wants a place
10 found for his training, his instruction, his development,
11 and not to be made a mere experiment to serve the pur-
12 poses of some study carried on for quite a different end.

The first eight questions refer to the above selection.

1. Select from the first sentence four subordinate clauses and classify them as adjective, adverbial, or objective.

2. Give the modifiers of *a. fond* (line 1); *b. finding* (line 3); *c. carried* (line 12).

3. Select an adverb modifying *a.* an adjective; *b.* a finite verb; *c.* an infinitive; *d.* an adverb; *e.* a phrase.

4. Select two infinitives and give the syntax of each.

5. Select two conjunctions that connect clauses and state what clauses each connects.

6. Give the mode and tense of each of the following: *a. have thought* (line 1); *b. would have been* (line 3); *c. had gone* (lines 5 and 6); *d. was* (line 7); *e. wants* (line 9.)

7. Give the syntax of *a. method* (line 2); *b. relief* (line 6); *c. experiment* (line 11).

8. Parse *a. those* (line 1); *b. in* (line 3); *c. growing* (line 9).

9. Decline the personal pronoun of *a.* the first person; *b.* the second person; *c.* the third person, neuter gender.

10. How is the passive voice of the verb formed? Illustrate by example.

ANSWERS.

1. *Who are fond,* adjective. *That those are,* objective. *If he had taken,* adverbial. *The position the Samaritan would have been in,* adverbial.

2. *a. So, of exaggerating method; b. the poor traveler* (object), *upon the roadside, on the way; c. on, for a different end.*

3. *a. So* (line 1); *b. sometimes* (line 1); *c. not* (line 7); *d. very* (line 2); *e. much* (line 2).

4. *a. To be made* (line 8) is present, passive, infinitive of the verb make, in apposition with *what. b. To serve* is present, active, infinitive of the verb serve, used adverbially, modifying *to be made.*

5. *a. That* connects *I have thought* with *those are in the position. b. If* connects *Samaritan would have been in* with *he had taken.*

6. *a.* Indicative, present perfect; *b.* Potential, past perfect; *c.* Indicative, past perfect; *d.* Indicative, past; *e.* indicative, present.

7. *a.* Objective, object of *exaggerating; b.* Nominative, subject of *was; c.* Objective, complement of infinitive *to be made.*

8. *a.* Pronoun, demonstrative, third person, plural, common gender, nominative, subject of *are ; b.* Prepositions used adverbially, modifying *been; c.* Present participle from verb *grow,* used as adjective modifying *child.*

9. *a.*

	Singular.	Plural.
Nominative	*I*	*we*
Possessive	*my* or *mine,*	*our,* or *ours.*
Objective	*me*	*us*

b.

Nominative	*you*	*you*
Possessive	*your* or *yours*	*your* or *yours*
Objective	*you*	*you*

c.

Nominative	*it*	*they*
Possessive	*its*	*their* or *theirs*
Objective	*it*	*them*

10. By adding the various forms of the verb *be* to the past participle, *e. g., I carry the book,* active; *The book is carried by me,* passive.

PHYSIOLOGY AND HYGIENE.

1. *a.* What is the periosteum? *b.* What is its function?

2. *a.* In what part of the body are found the largest and most powerful muscles? *b.* What is the function of the masseter muscle?

3. Mention in order the five general divisions of the alimentary canal.

4. In what way does the product of the lymphatic glands reach the blood?

5. Name three divisions of the circulatory system of the blood.

6. Mention two ways by which the blood may become impoverished.

7. In respiration, how does the exhaled air differ from that inhaled?

8. What is the effect of alcohol upon the lungs?

9. Mention three rules in regard to bathing that should be generally observed.

10. Show, by a drawing, the location of the sclerotic coat, the iris, and the pupil.

ANSWERS.

1. The fibro-vascular membrane that invests and nourishes the bones.

2. *a.* In the upper leg. *b.* It is a chewing muscle.

3. Mouth, pharynx, esophagus, stomach, small intestine, large intestine.

4. The blood passes thru the glands into the lymph tubes, then into the veins.

5. Heart, veins, arteries.

6. By loss of lymph or the red corpuscles.

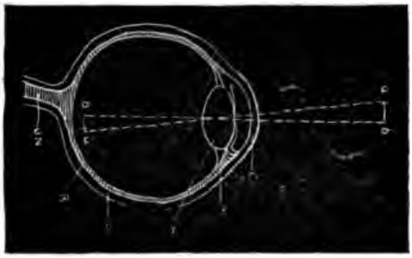
7. The exhaled air has been deprived of oxygen and has gained water, carbon dioxid, and other wastes.

8. It causes congestion of lungs, diminishes capacity, and interferes with respiration and circulation.

9. Cold baths should not be continued too long; should not

be taken immediately before or after eating, nor immediately after severe exercise.

10. Cut.



SCHOOL LAW.

1. What is the duty of a trustee in case the district meeting fails to vote a tax sufficient to pay the teacher, after applying the public money?
2. What penalty may be imposed upon a teacher for wilful failure to fulfill a contract to teach a term of school?
3. To whom must the county treasurer pay the school moneys received from the state?
4. Name three conditions required by law in the construction of school outbuildings?
5. By whose authority may repairs, not exceeding $50 in cost, be made without vote of the district?
6. During what part of the year is compulsory attendance of children upon instruction required?
7. During what length of time must a school be taught to be entitled to a distributive share in the state school funds?
8. In case a district suspends its school and contracts with another district for the instruction of its children to which district is paid *a.* the district quota; *b.* the sum apportioned for the attendance of such children?
9. Name two things that must be stated by a school commissioner in an order condemning a school-house.

ANSWERS.

1. To collect the rest of the wages by direct tax, but not to exceed four months in advance.
2. Annulment of the license.
3. The supervisors.
4. See the law in the school register,

5. By authority of the trustees.

6. Between Oct. 1 and June 1.

7. One hundred and sixty days, exclusive of Saturdays, but inclusive of legal holidays.

8. *a.* The first district. *b.* The second district.

9. *a.* That it is unfit for use, and *b.* not worth repairing.

METHODS AND SCHOOL MANAGEMENT.

1. Name in order the three essential steps to be observed in teaching a lesson.

2. State three characteristics of good drill work.

3. State what should be taught in connection with the study of a railroad line in an advanced grade.

4. In elementary number work what results should be sought?

5. What bad effects are liable to be produced thru having pupils sit at desks with seats so high that their feet do not reach the floor?

6. Name three immediate ends to be sought in elementary education.

7. How must all original concepts be acquired?

8. *a.* State two essential results of the recitation that the question method fails to accomplish. *b.* How may these results be accomplished?

9. State three advantages of written work.

10. Name three improper incentives for securing good scholarship.

ANSWERS.

1. The three essential steps are preparation, presentation, and application (drill).

2. Good drill work is *a.* of such a character as to test the ability of the pupil to apply what he has learned; *b.* it aids in the acquisition of skill in the performance of processes. *c.* A good drill should be upon what is new.

3. The important commercial centers along the route; the agricultural and manufactured products for which the road serves as a carrier; where these are deposited by the road and what becomes of them afterwards; the physiographic and climatic conditions which made the railroad a necessity; the effect the railroad has had upon the population and wealth of the localities thru which it passes; the advantages resulting from exchange of commodities due to the railroad.

4. Children should learn to observe, to think, and to express thoughts by symbols.

5. *a.* Children become so weary from the constrained position as to be unable to study. *b.* The strain upon the shoulders is liable to cause compression of the chest, and tuberculosis may result.

6. The immediate ends of elementary education are to teach children the elements of the 3 R's, to give ideas of order, and to train to ability to think.

7. Thru judgment.

8. *a.* Ability to tell what one knows of a topic consecutively; and teaching pupils to rely upon themselves. *b.* By employing the topical method.

9. *a.* It enables pupils to see their own mistakes; *b.* it makes them think carefully before answering questions; *c.* it aids them to learn to think clearly, instead of resting satisfied with confused ideas of a subject.

10. *a.* Prizes; *b.* rivalry among pupils; *c.* appeal to pupils' self-esteem.

CIVIL GOVERNMENT.

1. *a.* What is a republic? *b.* Name three countries that have a republican form of government.

2. What qualification as to citizenship is required for eligibility *a.* to the house of representatives; *b.* to the senate of the United States?

3. *a.* How are the judges of the courts of the United States chosen?

4. *a.* How are cabinet officers chosen? What is their *b.* term of office; *c.* salary?

5. Name two steps in the process of naturalization.

6. What is the purpose of a caucus or primary?

ANSWERS.

1. *a.* A republic is a representative democracy or a state where the government is *delegated* to a body of men elected by the citizens, who have an equal voice in selecting those who are to act for all in the government. *b.* United States, France, and Chile.

2. *a.* Seven years of citizenship. *b.* Nine years of citizenship.

3. Appointed by the president with the consent of the senate.

4. *a.* By the president with the consent of the senate. *b.* Retire with the president who appoints them, but can be removed by him at his discretion. *c.* $8,000.

5. Two years prior to naturalization he must file his intention of becoming a citizen. He must swear to support the constitution.

6. To nominate the candidates of a party to be voted for at the election.

History of Our Times.

In nearly all the states a knowledge of current affairs is considered a necessary qualification for the teacher. Hence questions on present-day history form a feature of the examinations. It is thus very necessary for the teacher to read some current events periodical. The best one for the teacher is *Our Times*. Thru this paper one can keep informed on passing events with a small outlay of time and effort.

In teachers' reading circles and other gatherings of teachers for professional improvement a quarter of an hour could be employed very profitably each time in discussing current events. Announce the subject at the previous meeting so that each one may come prepared to add something to the store of fact and thought.

(See *Our Times* for May 1 and May 15.)

What does the St. Louis exposition commemorate? Give a history of the purchase of Louisiana.

What is the object of the federation of employers?

Who is the Mad Mullah? Tell about the recent campaign against him in Somaliland.

Give the results of the Discovery's Antarctic voyage. Who have been appointed to mark our northwest boundary? How and why will it be marked?

What complaint has been made against Russia in regard to Manchuria?

Describe the present political situation in Spain.

Tell about the Balkan trouble. What region is known as Macedonia? As Albania?

For what does the Irish land bill provide?

What warning did England lately give the powers in regard to the Persian gulf?

Where will exhibitions be held during 1903?

What railway will be built across Canada? What is the character of the country thru which it will pass as to climate and products?

Describe Victoria Falls. How is it proposed to use the cataract for the production of power?

What noted traveler lately died?

What anniversaries will Rome and New York celebrate soon?

Where will a road over the Andes be built?

Describe the coal fields of the Northwest.

EDUCATIONAL FOUNDATIONS

is a magazine of Pedagogy. It is published monthly, from September to June inclusive, at $1.50 a year, and is sent to its subscribers regularly until ordered to be discontinued and paid for in full. We also publish THE SCHOOL JOURNAL, weekly, $2.00 a year; THE TEACHERS' INSTITUTE, monthly, $1.00 a year; THE PRIMARY SCHOOL, $1.00; and OUR TIMES, 30c. a year. Subscribers to two or more get club rates, sent on application. We also publish about 400 Standard Teachers' Books and Aids, and keep in stock all the best of such books of all publishers; also all Recitation and Dialog books published, Blackboard Stencils, Teachers' Aids, etc. Catalogs free. Orders may be sent to New York, Chicago, or Boston, as is most convenient, but all subscriptions should be sent to our New York office. E. L. KELLOGG & CO., The Educational Building, 61 East Ninth Street, New York. Entered at the Post Office as Second-class Matter.

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MONEY EARNED

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